

4.0 MITIGATION STRATEGY

Mitigation goals and objectives serve as the framework for future mitigation funding and project decisions. They shape the long term vision in the State of Montana for hazard mitigation. The prioritization of local project requests and statewide initiatives will be representative of this strategy.

4.1 MITIGATION GOALS, OBJECTIVES AND POTENTIAL ACTIONS

For years, the federal, state, tribal, and local governments, business, organizations, and individuals have spent trillions of dollars recovering from disasters. Mitigation works to reduce those losses, both fiscal and those that cannot be given a price, such as a life or sentimental items, by preventing the losses and even sometimes the disaster. With a comprehensive overview of the hazards that threaten Montana, goals and objectives have been developed to mitigate potential losses from those hazards. These goals represent a global vision and a general direction for mitigation activities. The objectives are more specific and suggest actions that can be taken to meet the objectives.

Mitigation goals and objectives for the 2007 State Plan Update were refined from those goals identified in the 2004 State Plan. Existing goals were reviewed and discussed at both the State and Local stakeholder meetings, and input was received from the public through the on-line survey. At the April 2007 State stakeholders meeting in Helena, existing goals were ranked in order of importance resulting in a re-prioritization of three of the top four goals, as follows:

- **Goal 1** - *Maximize the Use of Mitigation Actions that Prevent Losses from All Hazards* should remain the State's top priority.
- **Goal 2** - *Reduce the Community Impacts of Wildland and Rangeland Fires* (previously Goal 4).
- **Goal 3** - *Increase State's Capability to Provide Mitigation Opportunities* (previously Goal 2).
- **Goal 4** - *Mitigate the Potential Loss of Life and Property from Flooding* (previously Goal 3).

It was also recommended that **Goal 8 – Encourage Mitigation of Potentially Devastating but Historically Less Frequent Hazards** be split to include a separate goal for severe summer weather (thunderstorms, wind, hail, and tornadoes), one for hazardous material incidents, and another for historically less frequent hazards (landslides, volcanic eruptions and terrorism-violence). State stakeholders felt that the communicable disease hazard should be profiled in the State Plan Update but acknowledged that other state agencies have emergency action plans that address hazards associated with public health pandemics, livestock disease, and agro-emergencies.

Local stakeholders provided feedback on the wording of mitigation goals, goal prioritization and offered suggestions on new goals. The consensus from the local meetings indicated that:

- Severe summer weather should have a separate goal.
- The goal that formerly read "Increase the State's Capability to Provide Mitigation Opportunities" should be rephrased to *Increase State's Capability to Provide and Assist Locals with Mitigation Opportunities*.
- Drought and wildfire should be a higher priority than flooding.
- Communicable disease should be profiled in the State Plan Update

An informal survey was conducted at the local stakeholder meetings to rank the 10 hazards profiled in the 2004 State Plan in order of importance. The consensus within all six districts (**Figure 4.1-1**) was that Goals 1 and 2 (the All Hazard goals) should remain as the State's top priority. The ranking of hazard-specific goals by DES District are presented in **Table 4.1-1**. It should be noted that the hazard ranking was based on input from those individuals present at the local meetings, some of whom were not emergency managers, and may not be consistent with the hazard ranking presented in the Local PDM Plans developed for these areas. The communicable disease hazard was not ranked at the local meetings.

The on-line survey conducted for the State Plan Update also provided input into how the State's mitigation goals should be ranked. A cross-section of the State's population completed the survey. Out of the 200 survey respondents, 41 percent represented a county jurisdiction, 13 percent represented the State, 8 percent represented a federal agency, 5 percent were from a utility, 9 percent were from the general public, and 3 percent represented a tribe. The "other" category included 26 percent of the survey respondents and represented fire districts, cities, the Red Cross, private colleges, and healthcare providers. The survey results indicated the following ranking of the hazard-specific mitigation goals: 1) wildfire; 2) flooding; 3) drought; 4) winter storms; 5) hazardous materials; 6) wind-hail-tornadoes; 7) earthquakes; and 8) historically less frequent hazards. On-line survey results of hazard-specific goal ranking by DES District are presented in **Table 4.1-1**. A goal associated with the communicable disease hazard was not included in the on-line survey.

In consideration of all the various entities that provided input and the local plans that have been approved in the last three years, mitigation goals for the Montana State Plan Update were re-prioritized and/or re-worded as follows:

- **Goal 1** - Maximize the Use of Mitigation Actions that Prevent Losses from All Hazards
- **Goal 2** - Increase State's Capability to Provide and Assist Locals with Mitigation Opportunities
- **Goal 3** - Reduce the Community Impacts of Wildland and Rangeland Fires
- **Goal 4** - Minimize Economic Impacts of Drought
- **Goal 5** - Mitigate the Potential Loss of Life and Property from Flooding
- **Goal 6** - Reduce Impacts from Severe Winter Weather
- **Goal 7** - Reduce Impacts from Severe Summer Weather (Wind, Hail, Tornadoes)
- **Goal 8** - Reduce Losses from Hazardous Material Incidents
- **Goal 9** - Reduce Potential Earthquake Losses in Seismically Prone Areas
- **Goal 10** - Reduce the Likelihood of Communicable Disease Outbreaks
- **Goal 11** - Encourage Mitigation of Potentially Devastating but Historically Less Frequent Hazards

Although, the goal priorities will not dictate what types of projects are funded, they may help to focus some of the State agencies and demonstrate to federal, state, local, and tribal partners what the key mitigation activities in the various regions of Montana are.

Mitigation objectives for each goal were refined and prioritized based on input received at the stakeholders meetings and via the on-line survey. Mitigation objectives presented in the State Plan Update are consistent with those outlined in the Local PDM Plans, as shown in **Appendices B through G**.

Figure 4.1-1 Montana Disaster & Emergency Services Districts

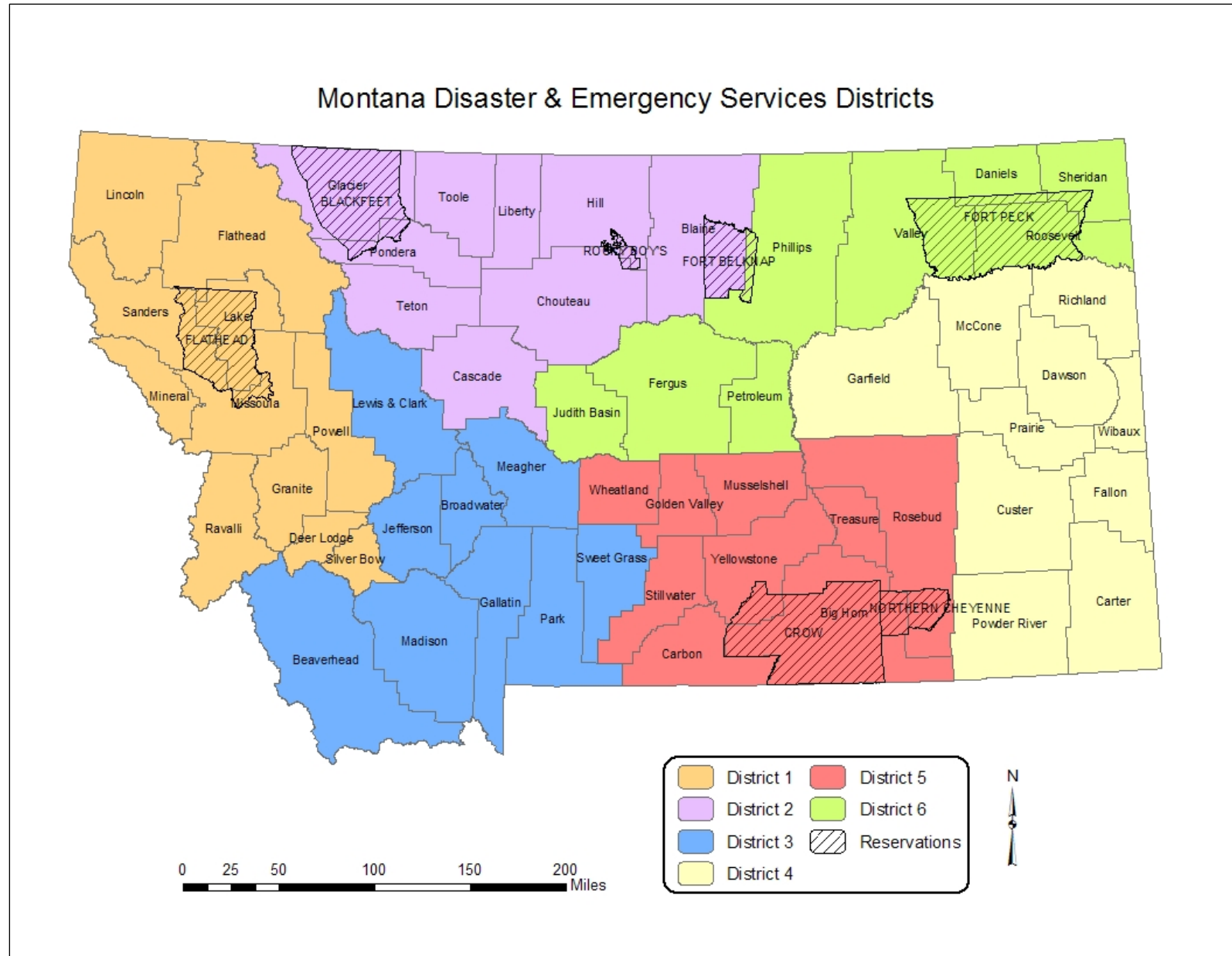


Table 4.1-1 DES District Ranking of Hazard-Specific Mitigation Goals for State Plan

District	Survey Type (# responding)	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th
District 1	Local Meeting Survey (17)	Wildfire	Flooding	Haz-Mat	Earthquake	Drought	Wind-Hail- Tornado	Winter Storm
	On-line Survey (33)	Wildfire	Haz-Mat	Flooding	Drought	Winter Storm	Earthquake	Wind-Hail- Tornado
District 2	Local Meeting Survey (16)	Wildfire	Drought	Wind-Hail- Tornado	Flooding	Haz-Mat	Winter Storm	Earthquake
	On-line Survey (22)	Haz-Mat	Wildfire	Winter Storm	Drought	Wind-Hail- Tornado	Flooding	Earthquake
District 3	Local Meeting Survey (26)	Wildfire	Earthquake	Haz-Mat	Flooding	Winter Storm	Drought	Wind-Hail- Tornado
	On-line Survey (52)	Wildfire	Earthquake	Flooding	Haz-Mat	Drought	Winter Storm	Wind-Hail- Tornado
District 4	Local Meeting Survey (10)	Winter Storm	Flooding	Wind-Hail- Tornado	Drought	Wildfire	Haz-Mat	Earthquake
	On-line Survey (31)	Winter Storm	Wind-Hail- Tornado	Wildfire (tie)	Flooding (tie)	Drought (tie)	Haz-Mat	Earthquake
District 5	Local Meeting Survey (14)	Wildfire	Flooding	Drought	Wind-Hail- Tornado	Winter Storm	Haz-Mat	Earthquake
	On-line Survey (13)	Wildfire	Flooding	Drought	Haz-Mat	Winter Storm	Wind-Hail- Tornado	Earthquake
District 6	Local Meeting Survey (11)	Drought	Wildfire	Winter Storm	Flooding	Wind-Hail- Tornado	Haz-Mat	Earthquake
	On-line Survey (11)	Drought	Wind-Hail- Tornado	Winter Storm	Wildfire	Flooding	Haz-Mat	Earthquake

The State Hazard Mitigation Officer expressed a strong desire to see more specific mitigation actions in the State Plan Update. Therefore, meetings were conducted with various state agencies for input to identify mitigation projects that would effectively reduce the risk from natural and man-made hazard events on state assets. Individuals who responded to the on-line survey also contributed a number of mitigation projects for inclusion in the State Plan Update. Statewide mitigation projects are listed under each of the goals and objectives below in two categories; those that are specific and are considered part of the statewide mitigation strategy at this time, and projects that are under consideration that can be developed more fully in the future.

An extensive review of the mitigation projects listed in the Local PDM Plans was conducted for integration into the State Plan Update. Mitigation projects from a total of 59 Local PDM Plans (including 15 draft county plans and 5 draft tribal plans) were entered into a database then categorized in accordance with the goals and objectives in the State Plan Update. **Appendices B through G** contain a compilation of the local mitigation projects organized by DES District. The more generalized mitigation actions listed under the goals and objects below include the types of projects listed in the local plans. Please refer **Appendices B through G** for more specific information.

The listings of local projects include some projects that may appear to be response rather than mitigation projects. They are listed because it is difficult to separate out the response projects from those that are truly mitigation. The State of Montana understands the difference between response and mitigation; however, these projects were important enough to the local jurisdictions to list in their Local PDM Plans and are therefore, included in the State of Montana Multi-Hazard Mitigation Plan.

Mitigation projects for all goals and objectives are identified below. State projects are not ranked in importance consistent with goal priorities as they are in the Local PDM Plans. For example, statewide earthquake projects (Goal 9) are equally important in the state mitigation strategy as projects to mitigate flood hazards (Goal 5). The importance of the state projects under each goal are considered equally important. A methodology for prioritizing mitigation projects for funding is outlined in *Section 5.3*.

Goal 1: Maximize the Use of Mitigation Actions that Prevent Losses from all Hazards

Objective 1.1: Increase readiness for the protection of life and property during an event.

Types of potential actions from Local PDM Plans:

- Develop evacuation plans.
- Identify and establish shelters.
- Place generators and/or hook-ups at critical facilities.
- Develop safe zones and shelter-in-place standards.
- Provide training to first responders.

Potential statewide actions under consideration:

- Ensure seamless communication between all law enforcement and public safety agencies at local, regional and state level.
- Provide funding for all branches of EMS to provide first responders with radios and communication tools in event of disaster.
- Establish adequate local infrastructure to provide critical services sufficient to support survivors for two weeks after a major hazard event.

- Identify critical operations that will allow state and local government to continuously operate in the event of a hazard event.
- Identify portable equipment and tools that can assist in the delivery of critical services in the event of a hazard event.
- Identify facilities and assets that support critical operations for continuity of government in the event of a hazard event.

Specific statewide mitigation actions:

- At the State's central computer complex in Helena, install appropriate fire suppression systems to maintain data and ensure continuity of operations.
- Within the Capitol complex in Helena, install fire suppression systems in document archives and libraries (without adequate suppression) to avoid loss of irreplaceable documents.

Objective 1.2: Enable every citizen in Montana to receive critical warning information immediately no matter where he/she is.

Types of potential actions from Local PDM Plans:

- Enable local cell providers to provide warning messages to cell phones or home phones since all broadcast stations cannot utilize EAS.
- Install siren systems.
- Expand and upgrade NOAA weather radio transmitters where they are getting old or don't cover as large an area as they could.
- Place NOAA weather radios in all local government offices and critical facilities.

Potential statewide actions under consideration:

- Conduct a Statewide warning capability assessment.
- Install EAS encoders/decoders at dispatch centers.
- Establish way for counties to be able to issue their own emergency messages through the State EAS plan.
- Develop Statewide emergency telephone notification system.
- Promote real-time Internet information systems.
- Promote better communication with Statewide Enhanced-911.
- Place NOAA weather radios in all state government offices.
- Promote use of NOAA weather radios in homes and when recreating (battery powered).
- Recommend voluntary placement of NOAA weather radios in restaurants, gas stations, stores, day cares, movie theaters, baseball fields, and/or golf courses.
- Provide NOAA weather radio education.

Specific statewide mitigation actions:

- Work with local jurisdictions to integrate procedures in the Statewide All-Hazard Emergency Alert System (EAS) plan into their local emergency plans.

Objective 1.3: Increase the public awareness of hazards.

Types of potential actions from Local PDM Plans:

- Increase the public awareness of hazards.
- Provide opportunities for the public to learn how to protect themselves.
- Encourage the public to take responsibility for their safety.

Potential statewide actions under consideration:

- Develop state and local mitigation outreach plans.
- Promote earth science education of hazards in schools.

- Conduct mitigation education in school programs.
- Promote citizen self sufficiency.

Specific statewide mitigation actions:

- Educate all public school students in preparedness activities including the American Red Cross "Masters of Disaster" curriculum.

Objective 1.4: Continuously improve hazard assessments and the associated evaluation of vulnerabilities from all hazards.

Types of potential actions from Local PDM Plans:

- Update maps to show new housing developments.
- Develop GIS data that can be used with FEMA's HAZUS loss estimation models.

Potential statewide actions under consideration:

- Coordinate with NRIS to provide a GIS system which is not duplicative of what's available locally and finance it as a state system that the counties can tap into.
- Conduct Level 1 HAZUS-MH analyses for all Montana counties.
- Improve Statewide HAZUS data.
- Continue studies of individual hazards.

Specific statewide mitigation actions:

- Provide easily accessible GIS databases of assets, populations, and hazard information to emergency managers.
- Determine GPS locations of all State buildings for detailed, non-public analysis.
- Conduct a non-public hazard assessment that utilizes specific State building locations and infrastructure locations to be used for mitigation actions and homeland security purposes.

Objective 1.5: Increase readiness for the protection of prehistoric and historic cultural resources during an event.

Types of potential actions from Local PDM Plans:

- Develop policies for mitigating loss of historic and cultural sites.
- Expand public awareness about the need to protect historic sites.

Potential statewide actions under consideration:

- Include economic and social values in inventories of structures and areas considered for hazard mitigation planning such as tourism value, heritage value, and scenic value.

Specific statewide mitigation actions:

- Plan for the protection of historic and cultural properties in hazard prone areas.

Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities

Objective 2.1: Support mitigation planning at all levels.

Types of potential actions from Local PDM Plans:

- Assist small local groups with funding for hazard mitigation.
- Provide assistance to small communities who have different needs and fewer resources than larger cities.

Potential statewide actions under consideration:

- Negotiate with FEMA to make the PDM-C mitigation grant process easier.
- Provide technical assistance with hazard mapping for communities without GIS capabilities.
- Append other emergency preparedness/response plans to the State PDM Plan as these could assist locals with mitigation planning.
- Work more closely with federal counterparts and utilize their expertise and training relative to hazard mitigation.

Specific statewide mitigation actions:

- Provide technical assistance to local governments.
- Continue mitigation planning training courses.
- Coordinate Local PDM Plan updates.
- Assist local jurisdictions fill out FEMA PDM-C grant applications.
- Assist local DES coordinators develop plan of action to complete their more doable mitigation projects.
- Develop standardized rating system for looking at risk, vulnerability and hazards for use as a template in local PDM Plan updates.

Objective 2.2: Promote mitigation through supportive legislation and funding.

Types of potential actions from Local PDM Plans:

- Develop land use and growth policies that prevent or guide development in high hazard areas.
- Create zoning ordinances that restrict development of hazard areas.

Potential statewide actions under consideration:

- Enforce mitigation standards in State and/or local subdivision regulations.
- Require growth policies to consider natural and man-made hazards.
- Develop stormwater management regulations.
- Develop a mitigation identity - market mitigation.
- Explore economic incentives for mitigation.
- Increase awareness among state and federal congressional staff for funding of mitigation.

Specific statewide mitigation actions:

- Create a State-funded grant program to assist with the 25 percent PDM-C match for local governments.
- Ensure State programs receive adequate funding to engage in mitigation planning and project implementation.

Objective 2.3: Coordinate and establish priorities for hazard mitigation projects at all levels in the State of Montana.

Potential statewide actions under consideration:

- Create an electronic database of completed mitigation projects in Montana.
- Create a private sector advisory group to assist with hazard mitigation planning.

Specific statewide mitigation actions:

- Continue outreach of mitigation project funding opportunities.
- Provide technical assistance with the environmental review process.
- Provide technical assistance for project development.
- Document mitigation successes.

- Further engage State agencies such as DMA, DOA, MDT, FWP and DNRC in the mitigation planning process.
- Increase the scope and participation of the State Hazard Mitigation Team to include establishing priorities for the state and ranking projects on an annual basis.

Goal 3: Reduce the Community Impacts of Wildland and Rangeland Fires

Objective 3.1: Enhance firefighting resources and improve firefighting capabilities.

Types of potential actions from Local PDM Plans:

- Assist local fire jurisdictions with wildfire response and fuel mitigation projects.
- Install water tanks or dry hydrants in outlying areas.
- Recruit more volunteer fire fighters.
- Build additional water storage facilities.

Potential statewide actions under consideration:

- Provide a centralized statewide public database to connect education and project resource needs with available resource/contractor services.
- Support and fund a statewide Firesafe Montana organization that can gather, disseminate and assist counties and other political subdivisions with grant information, project development and operations.

Specific statewide mitigation actions:

- Support and fund a statewide Firesafe Montana organization that can gather, disseminate and assist counties and other political subdivisions with grant information, project development and operations.

Objective 3.2: Reduce fuels in the WUI, in rangelands, and in communities.

Types of potential actions from Local PDM Plans:

- Develop funded homeowner fuel reduction programs.
- Create "fire break" network.
- Develop ordinances restricting CRP acreage near communities.
- Remove hazardous abandoned buildings.
- Reduce fuels along ingress and egress roadways.
- Encourage weed control/mowing along railroads.

Potential statewide actions under consideration:

- Conduct controlled burns.
- Reduce forest fuels.
- Streamline the permitting process for fuel reduction.
- Conduct fuel reduction in utility right-of-ways.
- Work with insurance industry to provide mitigation incentives.
- Integrate air quality standards with fuel reduction.
- Step-up mitigation efforts on federal lands adjacent to private/state holdings.

Specific statewide mitigation actions:

- Address wildland fuel hazards on state property including parks, day-use facilities and highway rights-of-way.
- At DNRC Forest Management Units statewide, expand units to provide risk reduction operations to reduce risk of complex events.

Objective 3.3: Enhance community awareness of wildfires through education.

Types of potential actions from Local PDM Plans:

- Promote educational programs such as Firewise and Firesafe Montana.
- Erect billboards on fire danger.

Potential statewide actions under consideration:

- Educate landowners in fuel reduction.
- Educate farmers, ranchers, landowners, and homeowners on specific rangeland fire problems.
- Educate the public to mitigate human-caused ignition sources of wildfire.

Specific statewide mitigation actions:

- Promote public responsibility for defensible space in the WUI.

Objective 3.4: Accurately assess and address the current WUI problems at the subdivision level.

Types of potential actions from Local PDM Plans:

- Mitigate development possibilities in the WUI.
- Adopt wildfire mitigation standards in high growth areas.
- Require water supply systems in existing subdivisions.
- Implement a home safety inspection program.

Potential statewide actions under consideration:

- Encourage community wildfire protection plans.

Specific statewide mitigation actions:

- Coordinate with federal and state land management agencies for fuel reduction.

Objective 3.5: Enhance effectiveness of response and evacuation.

Types of potential actions from Local PDM Plans:

- Develop evacuation plans for each community.
- Post evacuation route signs along primary and secondary access routes.
- Create alternate evacuation routes where needed.
- Identify and replace/fireproof wooden bridges.

Objective 3.6: Establish mapping or record keeping practices to support fuel management strategies.

Types of potential actions from Local PDM Plans:

- Develop GIS capability and fire/fuel map layers.
- Develop centralized wildfire history database.
- Map/locate structures in WUI.

Potential statewide actions under consideration:

- Centralize fire history documentation.
- Develop a consistent Statewide fire risk assessment system.

Goal 4: Minimize Economic Impacts of Drought

Objective 4.1: Identify water retention projects that could lessen the effects of drought

Types of potential actions from Local PDM Plans:

- Develop alternate water supply for irrigation.
- Work with Army Corps of Engineers to minimize the continuous drawdown of the Missouri River and Fort Peck Reservoir.

Specific statewide mitigation actions:

- Explore water retention project on the Milk River in Hill County.

Objective 4.2: Provide education and incentives for minimizing the effects of drought.

Types of potential actions from Local PDM Plans:

- Provide water conservation education.
- Offer seminars on drought management for crop and livestock producers.

Potential statewide actions under consideration:

- Fund scientific research on drought and work with farmers on-site.
- Improve drought insurance options for agriculture.
- Educate farmers on drought resistant crops.
- Promote soil erosion prevention measures.
- Develop a system for distributing information on current conditions.
- Promote water conservation methods and/or water management programs for all municipalities and counties.
- Provide education on year-round water conservation.
- Provide incentives for used water recycling systems and rain water collection systems.

Objective 4.3: Improve drought monitoring and assessments.

Types of potential actions from Local PDM Plans:

- Continue support of Local Drought Advisory Committees.
- Include weekly water equivalent measurements in routine at Coop observation sites.

Potential statewide actions under consideration:

- Use long-term groundwater monitoring to assess drought conditions.

Specific statewide mitigation actions:

- Continue to support the State Drought Advisory Committee.
- Install Statewide drought monitoring stations.

Goal 5: Mitigate the Potential Loss of Life and Property from Flooding

Objective 5.1: Provide adequate warning of flooding events.

Types of potential actions from Local PDM Plans:

- Install an automated river gage as needed.
- Install river warning systems.

Potential statewide actions under consideration:

- Map burn areas and provide maps/GIS data to the National Weather Service as a way to help mitigate the effects of flooding and debris flows.

Specific statewide mitigation actions:

- Link critical information in real-time to dispatch centers.
- Provide planning assistance to local responders.

Objective 5.2: Reduce the number of current and future structures in the floodplain.

Types of potential actions from Local PDM Plans:

- Acquire structures or land in the floodplain.
- Elevate structures in the floodplain.
- Relocate structures in the floodplain.
- Develop stricter local floodplain ordinances.

Potential statewide actions under consideration:

- Obtain conservation easements for land in the floodplain.
- Develop and improve upon model floodplain ordinances for local governments.
- Fully fund local floodplain managers.

Specific statewide mitigation actions:

- Encourage jurisdictions to pursue mitigation of repetitive loss structures or any severe repetitive loss properties identified in the future.

Objective 5.3: Prevent flooding of structures and infrastructure.

Types of potential actions from Local PDM Plans:

- Elevate roadways.
- Create water retention basins.
- Install or upgrade culverts.
- Conduct streambank restoration.
- Install backflow valves.
- Install or upgrade storm drains.

Potential statewide actions under consideration:

- Provide funding for flood mapping.
- Develop flood resistant landscape guidelines (berms, ponds, irrigation ditches, etc.).
- Develop driveway/private road bridge and culvert guidelines.
- Develop irrigation system guidelines.

Specific statewide mitigation actions:

- Upgrade bridges that inhibit water flow.

Objective 5.4: Increase the public awareness of flood mitigation.

Types of potential actions from Local PDM Plans:

- Educate the public on their responsibility to mitigate flooding.
- Form a Lower Milk River Coalition to try to obtain funding for automated gage sites.

Potential statewide actions under consideration:

- Educate public on need to limit development in the floodplain.
- Support real estate disclosures.
- Educate home and business owners on utility tie-downs.

Specific statewide mitigation actions:

- Continue to provide flood insurance education.

Objective 5.5: Improve the effectiveness of flood insurance programs.

Types of potential actions from Local PDM Plans:

- Participate in National Weather Service StormReady program which allows 25 points towards the Community Rating System points a community gets.

Potential statewide actions under consideration:

- Establish a schedule for National Flood Insurance Program map reviews and updates.

Specific statewide mitigation actions:

- Develop mapping for flood prone areas.
- Update floodplain mapping.
- Provide outreach and technical assistance in joining the National Flood Insurance Program Community Rating System for reducing flood insurance premiums.

Objective 5.6: Reduce the risk of dam or levee failure.

Types of potential actions from Local PDM Plans:

- Install dam failure alert systems.

Potential statewide actions under consideration:

- Remove high hazard, inadequate flood control structures.
- Provide flood analysis of existing dikes and levees.
- Repair state dams and levees.
- Provide matching funds for federal projects to mitigate existing deficiencies

Goal 6: Reduce Impacts from Severe Winter Weather

Objective 6.1: Increase community capabilities to mitigate winter weather hazards.

Types of potential actions from Local PDM Plans:

- Develop sheltering-in-place plans.
- Structurally analyze local emergency services facilities and strengthen as necessary.
- Identify and develop evacuation procedures for special needs individuals who cannot survive during a power outage.

Potential statewide actions under consideration:

- Encourage utilities to put their equipment underground in areas that are hit by extreme weather.

Specific statewide mitigation actions:

- Identify critical infrastructure vulnerable to extreme cold conditions.

Objective 6.2: Increase public awareness of winter weather hazards.

Types of potential actions from Local PDM Plans:

- Encourage landscape/tree trimming near power lines.
- Increase public awareness on their responsibility to be prepared for severe winter storms.
- Promote sale of winter survival kits at local community events.

Potential statewide actions under consideration:

- Create partnership with a private company (such as Wal-Mart, Home Depot, www.getreadygear.com) for winter survival kits already put together that can be sold to the public at a reasonable price.

Specific statewide mitigation actions:

- Distribute winter driving and survival tips.
- Promote winter survival kits for homes and cars.
- Promote partnership with National Weather Service and media to publicize Winter Hazards Weather Awareness Week to help educate public on preparedness.

Goal 7: Reduce Impacts from Severe Summer Weather (Hail, Wind, Tornadoes)

Objective 7.1: Increase community capabilities to mitigate summer weather hazards.

Types of potential actions from Local PDM Plans:

- Obtain shatter-proof film for windows at critical facilities.
- Make a bulk purchase of NOAA weather radios for public buildings and households.
- Develop special needs population plans.

Potential statewide actions under consideration:

- Encourage utilities to bury electric lines that could blow down and ignite fires.
- Improve public notification systems of impending storms.

Specific statewide mitigation actions:

- At the Montana Women's Prison in Billings, mitigate the structure against natural hazards to maintain security and operation.
- At the Montana Mental Health Nursing Care Center in Lewistown, mitigate the structure against natural hazards to maintain operation and meet medical needs.
- At the Pine Hills Youth Correctional Facility in Miles City, improve wind resistance of building roofs.

Objective 7.2: Increase public awareness of ways to mitigate summer weather hazards.

Types of potential actions from Local PDM Plans:

- Disseminate information on reducing property damage from high winds.
- Educate the public on recognizing severe weather and behaving safely.
- Promote SkyWarn weather spotter training classes.

Potential statewide actions under consideration:

- Educate public on native tree species which are more wind resistant.

Specific statewide mitigation actions:

- Promote partnership with National Weather Service and media to publicize Severe Weather Awareness Week to help educate public on preparedness and what to do when the warnings are issued.

Goal 8: Reduce Losses from Hazardous Material Incidents

Objective 8.1: Provide education, training on haz-mat incidents and response.

Types of potential actions from Local PDM Plans:

- Provide hazardous materials equipment and training to rural communities.
- Increase public awareness of shelter-in-place procedures for homes near transportation networks that commonly carry hazardous materials.

Potential statewide actions under consideration:

- Establish more hazardous materials teams around the state.
- Utilize the emergency alert system for public notification during hazardous materials emergencies.

Objective 8.2: Identify and secure hazardous materials locations and transporters.

Types of potential actions from Local PDM Plans:

- Enhance information capability on types of hazardous materials traveling transportation routes.
- Install security measures near fixed hazardous materials facilities.

Potential statewide actions under consideration:

- Install hazardous materials drains and catch basins at problem spots near waterways.

Objective 8.3: Support hazardous materials regulations and agreements.

Types of potential actions from Local PDM Plans:

- Improve coordination among the various responders.

Potential statewide actions under consideration:

- Enforce hazardous materials reporting standards for fixed facilities.

Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas

Objective 9.1: Provide for earthquake resistance in new construction.

Types of potential actions from Local PDM Plans:

- Provide greater enforcement of current building codes.
- Promote seismic review of proposed subdivisions.

Potential statewide actions under consideration:

- Create stronger building standards for critical facilities and structures housing vulnerable populations.
- Constantly review and incorporate the most advanced seismic mitigation techniques into codes and practices.

- Constantly update professionals with the responsibility for seismic protection design and construction on those techniques.
- Maintain aesthetics of historic buildings while implements seismic retrofits.

Objective 9.2: Educate the public in earthquake mitigation and readiness.

Types of potential actions from Local PDM Plans:

- Conduct earthquake drills in schools and enhance education/training on earthquake preparedness.
- Encourage workplace earthquake drills.

Potential statewide actions under consideration:

- Map earthquake risk zones and faults to standard scale.
- Educate transportation and utility employees on seismic hazards.

Specific statewide mitigation actions:

- Expand and upgrade the earthquake monitoring network and information reporting capabilities.
- Continue “Earthquake Preparedness Month” outreach activities during the month of October.
- Continue presentations and distribution of earthquake awareness materials.

Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.

Types of potential actions from Local PDM Plans:

- Coat windows in schools and critical facilities with shatter resistant film.
- Inspect key bridges for seismic stability.
- Retrofit critical facilities for earthquakes.

Potential statewide actions under consideration:

- Conduct seismic evaluations of university campus buildings and utility tunnels to identify where seismic retrofits are necessary.
- Conduct seismic evaluations of government buildings and critical facilities.
- Conduct structural retrofits of government buildings (including university campuses) and critical facilities.
- Create residential and business retrofit programs.
- Retrofit bridges and overpasses to ensure seismic stability.
- Retrofit public utility systems for seismic stability.
- Install utility shut off valves at all government buildings and critical facilities.

Specific statewide mitigation actions:

- At the MSU-Bozeman campus, seismically retrofit Leon Hall, an 11-story masonry veneer build with questionable veneer attachment to the frame.
- At the UM-Western campus in Dillon, stabilize Main Hall which was damaged from recent earthquakes.
- Within the State government complex in Helena, construct and relocate the central commuters to a seismically-hardened building with adequate services to ensure continuity of operation.
- At the State Prison complex in Deer Lodge, improve support systems and implement minimal seismic upgrades to ensure security and maintain operation.
- At the Montana State Hospital in Warm Springs, seismically harden buildings and expand support systems to assure continued operation and meet medical needs.

- At the UM-Western campus in Dillon, seismically harden buildings with emphasis to heating plant, refuge buildings and housing and brace utilities distribution. Campus has potential to be upgraded to operate as secure refuge.
- At the MSU-Bozeman campus, seismically harden buildings with emphasis to the heating plant, critical research buildings, refuge buildings and housing including the addition of a redundant point source to central utility distribution system.
- At the Montana Tech of the UM campus in Butte, seismically harden buildings with emphasis to heating plant, critical research buildings, refuge buildings and housing.
- At the Montana Tech of the UM campus in Butte, relocate the seismic monitoring center to a stable building.
- At the Capitol Complex in Helena, seismically retrofit buildings to mitigate loss.
- At the UM-Missoula campus, seismically harden buildings with emphasis to heating plant, critical research buildings, refuge buildings and housing including the addition of a redundant point source to central utility distribution system.
- At the Montana Developmental Center in Boulder, implement seismic upgrades.

Objective 9.4: Implement non-structural mitigation projects to harden State and community assets and infrastructure from seismic hazards

Types of potential actions from Local PDM Plans:

- Complete earthquake risk assessment at public schools and identify non-structural projects like securing equipment.
- Tie down objects in critical facilities and vulnerable population locations that could fall during an earthquake.
- Install expansion joint in underground utilities during new or replacement construction.

Potential statewide actions under consideration:

- Implement non-structural projects at government buildings, particularly critical facilities.
- Implement non-structural mitigation in schools and hospitals such as equipment/furniture straps.

Specific statewide mitigation actions:

- At the State Information Technology Center in Helena, obtain earthquake mitigation devices for data center equipment to provide protection during non-catastrophic earthquakes.
- At the Montana Developmental Center in Boulder, implement non-structural projects.

Goal 10: Reduce the Likelihood of Communicable Disease Outbreaks

Objective 10.1: Reduce losses associated with a human health emergency.

Types of potential actions from Local PDM Plans:

- Continue working with the public health agencies.
- Conduct a public education campaign on how to prevent the spread of disease.

Potential statewide actions under consideration:

- Improve surveillance of communicable disease by educating the general population about the importance of reporting disease and how to report.
- Create a State task force to examine and provide ethical guidance to health care providers and institutions in a pandemic situation.
- Develop Executive Order that suspends the normal “standards of care” in a pandemic.

Objective 10.2: Reduce losses associated with livestock disease outbreaks and agricultural emergencies.

Types of potential actions from Local PDM Plans:

- Provide holding facilities to quarantine affected livestock.
- Provide training to first responders on response to livestock and agricultural emergencies.

Potential statewide actions under consideration:

- Maximize mitigation efforts to control bison carrying diseases into Montana.
- Mitigate the potential for loss from quarantined cattle traveling through the State from Canada.

Goal 11: Encourage Mitigation of Potentially Devastating but Historically Less Frequent Hazards

Objective 11.1: Prevent losses from acts of terrorism, violence, and civil unrest.

Types of potential actions from Local PDM Plans:

- Increase security of critical facilities.

Potential statewide actions under consideration:

- Support the mitigation-related goals, objectives, and actions of the Montana Homeland Security Strategic Plan.
- Enhance security along the northern border of the State.

Objective 11.2: Identify and reduce potential losses from landslides and avalanches.

Types of potential actions from Local PDM Plans:

- Use landslide and avalanche mapping in infrastructure and subdivision reviews.

Potential statewide actions under consideration:

- Identify and map areas of greatest landslide and avalanche potential.
- Conduct proactive scaling and reducing of back slopes.
- Create a landslide/avalanche technical committee.

Objective 11.3: Identify and reduce losses from volcanic activity.

Types of potential actions from Local PDM Plans:

- Educate the public on how to respond to volcanic ash fall-out.

4.1.1 Proposed Statewide Initiatives

Many of the projects proposed are the types of projects that are implemented at the local level. Some, however, are statewide in nature and would be implemented by state agencies. An implementation plan for specific statewide projects follows in **Table 4.1-1**.

Table 4.1-2 Plan Implementation for Statewide Mitigation Actions; Specific Projects

Project	Objective	Lead Agency	Funding Source
At the State's central computer complex in Helena, install appropriate fire suppression systems to maintain data and ensure continuity of operations.	1.1	Montana Dept. of Administration (DOA)	Existing budgets or grant
Within the Capitol Complex in Helena, install fire suppression systems in document archives and libraries to avoid loss of irreplaceable documents	1.1	DOA	Existing budgets or grant
Work with local jurisdictions to integrate procedures in the Statewide All-Hazard Emergency Alert System (EAS) plan into their local emergency plans.	1.2	DES, NWS	PDM/HMGP or Homeland Security grant
Educate all public school students in preparedness activities including the American Red Cross "Masters of Disaster" curriculum	1.3	OPI	Existing budget
Provide easily accessible GIS databases of hazard information to emergency managers	1.4	DES, Montana State Library	Existing budgets or grant
Determine GPS locations of all State buildings for detailed, non-public analysis	1.4	DOA, DES	Existing budgets or Homeland Security grant
Conduct non-public hazard assessment that utilizes specific State building locations and infrastructure locations to be used for mitigation actions and homeland security purposes	1.4	DES	Homeland Security or PDM/HMGP grant
Plan for the protection of historic and cultural properties in hazard prone areas	1.5	DES, Montana Heritage Program	Existing budgets
Provide technical assistance to local governments	2.1	DES	Existing budgets
Continue mitigation planning training courses	2.1	DES, FEMA	Existing budgets
Coordinate Local PDM Plan Updates	2.1	DES	Existing budget
Assist local jurisdictions fill out FEMA PDM-C grant applications	2.1	DES	Existing budget
Assist local DES coordinators develop action plan to complete their more doable mitigation projects	2.1	DES	Existing budget
Develop standardized rating system for looking at risk, vulnerability and hazards for use as a template in local PDM Plan updates.	2.1	DES	Existing budget
Create a state funded grant program to assist with the 25% match for local governments	2.2	Legislature, DES	State funds
Ensure State programs receive adequate funding to engage in mitigation planning and project implementation	2.2	Legislature, DES	Existing budgets
Continue outreach of mitigation project funding opportunities	2.3	DES, DNRC	Existing budgets
Provide technical assistance with the environmental review process	2.3	DES, DNRC, DEQ, FWP, FEMA	Existing budgets
Provide technical assistance with project development	2.3	DES, DNRC, FEMA	Existing budgets
Document mitigation successes	2.3	DES, DNRC	Existing budgets
Further engage State agencies such as DMA, DOA, MDT, FWP and DNRC in the mitigation planning process	2.3	DMA, DOA, MDT, FWP, DNRC	Existing budgets
Increase the scope and participation of the State Hazard Mitigation Team to include establishing priorities for the state and ranking projects on an annual basis.	2.3	DES	Existing budget
Support and fund a statewide Firesafe Montana organization that can gather, disseminate and assist counties and other political subdivisions with grant information, project development and operations	3.1	DES, DNRC	Existing budget

Table 4.1-2 Plan Implementation for Statewide Mitigation Actions; Specific Projects

Project	Objective	Lead Agency	Funding Source
Address wildland fuel hazards on state property including parks, day-use facilities and highway rights-of-way	3.2	FWP, MDT, DNRC – Forestry Division	Existing budgets or grant
At DNRC Forest Management Units statewide, expand units to provide risk reduction operations to reduce risk of complex events	3.2	DNRC – Forestry Division	Existing budgets or grant
Promote public responsibility for defensible space in the WUI	3.3	DES, DNRC-Forestry Division	Existing budgets or grant
Coordinate with federal and state land management agencies for fuel reduction	3.4	DNRC – Forestry Division, USFS, BLM, BIA, FWP	Existing budgets or grant
Explore water retention project on the Milk River in Hill County	4.1	Legislature, MT Drought Advisory Committee	Existing budgets or grant
Continue to support the State Drought Advisory Committee	4.3	Legislature	Existing budget
Install Statewide drought monitoring stations	4.3	USDA, MT Drought Advisory Committee	Grant
Link critical information in real-time to dispatch centers	5.1	DES, NWS	Existing budgets
Provide planning assistance to local responders	5.1	DES	Existing budgets
Encourage jurisdictions to pursue mitigation of repetitive loss structures or any severe repetitive loss properties identified in the future.	5.2	DES	Existing budgets
Upgrade bridges that inhibit water flow	5.3	DES, MDT	Existing budgets of PDM-C Grant
Continue to provide flood insurance education	5.4	DES, DNRC	Existing budgets
Develop mapping for flood prone areas	5.5	DNRC – Water Resources, FEMA	NFIP Map Modernization Funding
Update floodplain mapping	5.5	DNRC – Water Resources, FEMA	NFIP Map Modernization Funding
Provide outreach and technical assistance in joining the NFIP Community Rating System for reducing flood insurance premiums	5.5	DNRC – Water Resources, FEMA	Existing budgets or CAP grant
Identify critical infrastructure vulnerable to extreme cold conditions	6.1	DES	Existing budget
Promote disaster supply and winter survival kits for homes and cars	6.2	DES	Existing budget or grant
Promote partnership with National Weather Service and media to publicize Winter Hazards Weather Awareness Week to help educate public on preparedness	6.2	DES, NWS	Existing budget
Distribute winter driving and survival tips	6.2	DES, NWS	Existing budget or grant
At the Montana Women's Prison in Billings, mitigate the structure against natural hazards to maintain security and operation	7.1	DOA	Existing budget or grant
At the Montana Mental Health Nursing Care Center in Lewistown, mitigate the structure against natural hazards to maintain operation and meet medical needs	7.1	DOA	Existing budget or grant
At the Pine Hills Youth Correctional Facility in Miles City, improve wind resistance of building roofs	7.1	DOA	Existing budget or grant
Promote partnership with National Weather Service and media to publicize Severe Weather Awareness Week to help educate public on preparedness and what to do when the warnings are issued.	7.2	DES, NWS	Existing budget or grant
Install hazardous material drains and catch basins at problem spots near waterways.	8.2	MDT	Existing budget
Expand and upgrade earthquake monitoring network and reporting capabilities	9.2	MBMG	Existing budget or grant

Table 4.1-2 Plan Implementation for Statewide Mitigation Actions; Specific Projects

Project	Objective	Lead Agency	Funding Source
Continue "Earthquake Preparedness Month" outreach activities during the month of October	9.2	DES, MBMG	Existing budgets
Continue presentations and distribution of earthquake awareness materials	9.2	DES, MBMG	Existing budgets
At the MSU-Bozeman campus, seismically retrofit Leon Hall, an 11-story masonry veneer build with questionable veneer attachment to the frame	9.3	DOA	Existing budgets or grant
At the UM-Western campus in Dillon, stabilize Main Hall which was damaged from recent earthquakes	9.3	DOA	Existing budgets or grant
Within the State government complex in Helena, construct and relocate the central commuters to a seismically hardened building with adequate services to ensure continuity of operation	9.3	DOA	Existing budgets or grant
At the State Prison complex in Deer Lodge, improve support systems and implement minimal seismic upgrades to ensure security and maintain operation	9.3	DOA	Existing budgets or grant
At the Montana State Hospital in Warm Springs, seismically harden buildings and expand support systems to assure continued operation and meet medical needs	9.3	DOA	Existing budgets or grant
At the UM-Western campus in Dillon, seismically harden buildings with emphasis to heating plant, refuge buildings and housing and brace utilities distribution	9.3	DOA	Existing budgets or grant
At the MSU-Bozeman campus, seismically harden buildings with emphasis to the heating plant, critical research buildings, refuge buildings and housing including the addition of a redundant point source to central utility distribution system	9.3	DOA	Existing budgets or grant
At the Montana Tech of the UM campus in Butte, seismically harden buildings with emphasis to heating plant, critical research buildings, refuge buildings and housing	9.3	DOA	Existing budgets or grant
At the Montana Tech of the UM campus in Butte, relocate the seismic monitoring center to a stable building	9.3	DOA	Existing budgets or grant
At the Capitol Complex in Helena, seismically retrofit buildings to mitigate loss	9.3	DOA	Existing budgets or grant
At the Montana Developmental Center in Boulder, implement seismic upgrades	9.3	DOA	Existing budgets or grant
Conduct structural retrofits of government buildings (including university campuses) and critical facilities	9.3	DOA	Existing budgets or grant
At the State Information Technology Center in Helena, obtain earthquake mitigation devices for data center equipment to provide protection during non-catastrophic earthquakes	9.4	DOA	Existing budgets or grant
At the Montana Developmental Center in Boulder, implement non-structural projects	9.4	DOA	Existing budgets or grant

Projects have been ranked and prioritized, in accordance with the criteria outlined in *Section 5.3*. The scoring regime includes criteria for non-planning and planning projects. **Appendix A** contains the project scoring sheets. A prioritized list of projects is presented in **Table 4.1-3**.

Table 4.1-3 Prioritized List of State-Specific Mitigation Projects; Planning and Non-Planning Projects

Score	Mitigation Goal	Mitigation Objective	Mitigation Project
NON-PLANNING PROJECTS			
48 High	Goal 3: Reduce the Community Impacts of Wildland and Rangeland Fires	Objective 3.1: Enhance firefighting resources and improve firefighting capabilities.	Support and fund a statewide Firesafe Montana organization that can gather, disseminate and assist counties and other political subdivisions with grant information, project development and operations.
44 High	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.2: Educate the public in earthquake mitigation and readiness.	Continue "Earthquake Preparedness Month" outreach activities during the month of October.
44 High	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.2: Educate the public in earthquake mitigation and readiness.	Continue presentations and distribution of earthquake awareness materials.
42 High	Goal 5: Mitigate the Potential Loss of Life and Property from Flooding	Objective 5.1: Provide adequate warning of flooding events.	Link critical information in real-time to dispatch centers.
42 High	Goal 5: Mitigate the Potential Loss of Life and Property from Flooding	Objective 5.2: Reduce the number of current and future structures in the floodplain.	Encourage jurisdictions to pursue mitigation of repetitive loss structures or any severe repetitive loss properties identified in the future.
41 High	Goal 1: Maximize the Use of Mitigation Actions that Prevent Losses from all Hazards	Objective 1.1: Increase readiness for the protection of life and property during an event.	At the State's central computer complex in Helena, install appropriate fire suppression systems to maintain data and ensure continuity of operations.
40 High	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.2: Educate the public in earthquake mitigation and readiness.	Expand and upgrade the earthquake monitoring network and information reporting capabilities.
40 High	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.3: Coordinate and establish priorities for hazard mitigation projects at all levels in the State of Montana.	Continue outreach of mitigation project funding opportunities.
40 High	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.3: Coordinate and establish priorities for hazard mitigation projects at all levels in the State of Montana.	Further engage State agencies such as DMA, DOA, MDT, FWP and DNRC in the mitigation planning process.
40 High	Goal 3: Reduce the Community Impacts of Wildland and Rangeland Fires	Objective 3.2: Reduce fuels in the WUI	Address wildland fuel hazards on state property including parks, day-use facilities and highway rights-of-way.
40 High	Goal 3: Reduce the Community Impacts of Wildland and Rangeland Fires	Objective 3.2: Reduce fuels in the WUI	At DNRC Forest Management Units statewide, expand units to provide risk reduction operations to reduce risk of complex events.
40 High	Goal 4: Minimize Economic Impacts of Drought	Objective 4.1: Identify water retention projects that could lessen the effects of drought	Explore water retention project on the Milk River in Hill County.
40 High	Goal 5: Mitigate the Potential Loss of Life and Property from Flooding	Objective 5.5: Improve the effectiveness of flood insurance programs.	Provide outreach and technical assistance in joining the NFIP Community Rating System for reducing flood insurance premiums.
39 Medium	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.1: Support mitigation planning at all levels.	Provide technical assistance to local governments.
39 Medium	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.1: Support mitigation planning at all levels.	Continue mitigation planning training courses.

Table 4.1-3 Prioritized List of State-Specific Mitigation Projects; Planning and Non-Planning Projects

Score	Mitigation Goal	Mitigation Objective	Mitigation Project
39 Medium	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.1: Support mitigation planning at all levels.	Assist local jurisdictions fill out FEMA PDM-C grant applications.
39 Medium	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.3: Coordinate and establish priorities for hazard mitigation projects at all levels in the State of Montana.	Provide technical assistance with the environmental review process.
39 Medium	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.3: Coordinate and establish priorities for hazard mitigation projects at all levels in the State of Montana.	Provide technical assistance for project development.
39 Medium	Goal 6: Reduce Impacts from Severe Winter Weather	Objective 6.1: Increase community capabilities to mitigate winter weather hazards.	Identify critical infrastructure vulnerable to extreme cold conditions.
38 Medium	Goal 7: Reduce Impacts from Severe Summer Weather (Hail, Wind, Tornadoes)	Objective 7.1: Increase community capabilities to mitigate summer weather hazards.	At the Montana Women's Prison in Billings, mitigate the structure against natural hazards to maintain security and operation.
38 Medium	Goal 7: Reduce Impacts from Severe Summer Weather (Hail, Wind, Tornadoes)	Objective 7.1: Increase community capabilities to mitigate summer weather hazards.	At the Montana Mental Health Nursing Care Center in Lewistown, mitigate the structure against natural hazards to maintain operation and meet medical needs.
38 Medium	Goal 7: Reduce Impacts from Severe Summer Weather (Hail, Wind, Tornadoes)	Objective 7.1: Increase community capabilities to mitigate summer weather hazards.	At the Pine Hills Youth Correctional Facility in Miles City, improve wind resistance of building roofs.
37 Medium	Goal 1: Maximize the Use of Mitigation Actions that Prevent Losses from all Hazards	Objective 1.1: Increase readiness for the protection of life and property during an event.	Within the Capitol complex in Helena, install fire suppression systems in document archives and libraries (without adequate suppression) to avoid loss of irreplaceable documents.
37 Medium	Goal 5: Mitigate the Potential Loss of Life and Property from Flooding	Objective 5.5: Improve the effectiveness of flood insurance programs.	Develop mapping for flood prone areas.
37 Medium	Goal 5: Mitigate the Potential Loss of Life and Property from Flooding	Objective 5.5: Improve the effectiveness of flood insurance programs.	Update floodplain mapping.
36 Medium	Goal 1: Maximize the Use of Mitigation Actions that Prevent Losses from all Hazards	Objective 1.2: Enable every citizen in Montana to receive critical warning information immediately no matter where he/she is.	Work with local jurisdictions to integrate procedures in the Statewide All-Hazard Emergency Alert System (EAS) plan into their local emergency plans.
36 Medium	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.2: Promote mitigation through supportive legislation and funding.	Create a State-funded grant program to assist with the 25 percent PDM-C match for local governments.
36 Medium	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.2: Promote mitigation through supportive legislation and funding.	Ensure State programs receive adequate funding to engage in mitigation planning and project implementation.
36 Medium	Goal 5: Mitigate the Potential Loss of Life and Property from Flooding	Objective 5.4: Increase the public awareness of flood mitigation.	Continue to provide flood insurance education.
35 Medium	Goal 6: Reduce Impacts from Severe Winter Weather	Objective 6.2: Increase public awareness of winter weather hazards.	Promote winter survival kits for homes and cars.
34 Medium	Goal 6: Reduce Impacts from Severe Winter Weather	Objective 6.2: Increase public awareness of winter weather hazards.	Distribute winter driving and survival tips.
34 Medium	Goal 7: Reduce Impacts from Severe Summer Weather (Hail, Wind, Tornadoes)	Objective 7.2: Increase public awareness of ways to mitigate summer weather hazards.	Promote partnership with National Weather Service and media to publicize Severe Weather Awareness Week to help educate public on preparedness and what to do when the warnings are issued.

Table 4.1-3 Prioritized List of State-Specific Mitigation Projects; Planning and Non-Planning Projects

Score	Mitigation Goal	Mitigation Objective	Mitigation Project
33 Medium	Goal 5: Mitigate the Potential Loss of Life and Property from Flooding	Objective 5.3: Prevent flooding of structures and infrastructure.	Upgrade bridges that inhibit water flow.
33 Medium	Goal 6: Reduce Impacts from Severe Winter Weather	Objective 6.2: Increase public awareness of winter weather hazards.	Promote partnership with National Weather Service and media to publicize Winter Hazards Weather Awareness Week to help educate public on preparedness
33 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	At the MSU-Bozeman campus, seismically harden buildings with emphasis to the heating plant, critical research buildings, refuge buildings and housing including the addition of a redundant point source to central utility distribution system.
33 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	At the Capitol Complex in Helena, seismically retrofit buildings to mitigate loss.
32 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	At the UM-Western campus in Dillon, seismically harden buildings with emphasis to heating plant, refuge buildings and housing and brace utilities distribution. Campus has potential to be upgraded to operate as secure refuge.
32 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	At the UM-Missoula campus, seismically harden buildings with emphasis to heating plant, critical research buildings, refuge buildings and housing including the addition of a redundant point source to central utility distribution system.
32 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.4: Implement non-structural mitigation projects to harden State and community assets and infrastructure from seismic hazards	At the Montana Developmental Center in Boulder, implement non-structural projects
31 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.4: Implement non-structural mitigation projects to harden State and community assets and infrastructure from seismic hazards	At the State Information Technology Center in Helena, obtain earthquake mitigation devises for data center equipment to provide protection during non-catastrophic earthquakes.
30 Medium	Goal 1: Maximize the Use of Mitigation Actions that Prevent Losses from all Hazards	Objective 1.4: Continuously improve hazard assessments and the associated evaluation of vulnerabilities from all hazards.	Determine GPS locations of all State buildings for detailed, non-public analysis.
30 Medium	Goal 1: Maximize the Use of Mitigation Actions that Prevent Losses from all Hazards	Objective 1.4: Continuously improve hazard assessments and the associated evaluation of vulnerabilities from all hazards.	Conduct a non-public hazard assessment that utilizes specific State building locations and infrastructure locations to be used for mitigation actions and homeland security purposes.
30 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	Within the State government complex in Helena, construct and relocate the central commuters to a seismically-hardened building with adequate services to ensure continuity of operation.
30 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	At the Montana Tech of the UM campus in Butte, seismically harden buildings with emphasis to heating plant, critical research buildings, refuge buildings and housing.
29 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	At the MSU-Bozeman campus, seismically retrofit Leon Hall, an 11-story masonry veneer build with questionable veneer attachment to the frame.

Table 4.1-3 Prioritized List of State-Specific Mitigation Projects; Planning and Non-Planning Projects

Score	Mitigation Goal	Mitigation Objective	Mitigation Project
29 Medium	Goal 1: Maximize the Use of Mitigation Actions that Prevent Losses from all Hazards	Objective 1.3: Increase the public awareness of hazards.	Educate all public school students in preparedness activities including the American Red Cross "Masters of Disaster" curriculum.
28 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	At the Montana Tech of the UM campus in Butte, relocate the seismic monitoring center to a stable building.
27 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	At the UM-Western campus in Dillon, stabilize Main Hall which was damaged from recent earthquakes.
27 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	At the State Prison complex in Deer Lodge, improve support systems and implement minimal seismic upgrades to ensure security and maintain operation.
27 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	At the Montana State Hospital in Warm Springs, seismically harden buildings and expand support systems to assure continued operation and meet medical needs.
27 Medium	Goal 9: Reduce Potential Earthquake Losses in Seismically Prone Areas	Objective 9.3: Seismically retrofit existing critical facilities/infrastructure and government assets.	At the Montana Developmental Center in Boulder, implement seismic upgrades.
26 Medium	Goal 1: Maximize the Use of Mitigation Actions that Prevent Losses from all Hazards	Objective 1.4: Continuously improve hazard assessments and the associated evaluation of vulnerabilities from all hazards.	Provide easily accessible GIS databases of assets, populations, and hazard information to emergency managers.
26 Medium	Goal 4: Minimize Economic Impacts of Drought	Objective 4.3: Improve drought monitoring and assessments.	Install Statewide drought monitoring stations.
22 Low	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.3: Coordinate and establish priorities for hazard mitigation projects at all levels in the State of Montana.	Document mitigation successes.
21 Low	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.3: Coordinate and establish priorities for hazard mitigation projects at all levels in the State of Montana.	Increase the scope and participation of the State Hazard Mitigation Team to include establishing priorities for the state and ranking projects on an annual basis.
PLANNING PROJECTS			
20 High	Goal 3: Reduce the Community Impacts of Wildland and Rangeland Fires	Objective 3.3: Enhance community awareness of wildfires through education.	Promote public responsibility for defensible space in the WUI.
20 High	Goal 3: Reduce the Community Impacts of Wildland and Rangeland Fires	Objective 3.4: Accurately assess and address the current WUI problems at the subdivision level.	Coordinate with federal and state land management agencies for fuel reduction.
17 Medium	Goal 5: Mitigate the Potential Loss of Life and Property from Flooding	Objective 5.1: Provide adequate warning of flooding events.	Provide planning assistance to local responders.
16 Medium	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.1: Support mitigation planning at all levels.	Coordinate Local PDM Plan updates.
15 Medium	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.1: Support mitigation planning at all levels.	Assist local DES coordinators develop plan of action to complete their more doable mitigation projects.

Table 4.1-3 Prioritized List of State-Specific Mitigation Projects; Planning and Non-Planning Projects

Score	Mitigation Goal	Mitigation Objective	Mitigation Project
13 Medium	Goal 1: Maximize the Use of Mitigation Actions that Prevent Losses from all Hazards	Objective 1.5: Increase readiness for the protection of prehistoric and historic cultural resources during an event.	Plan for the protection of historic and cultural properties in hazard prone areas.
13 Medium	Goal 4: Minimize Economic Impacts of Drought	Objective 4.3: Improve drought monitoring and assessments.	Continue to support the State Drought Advisory Committee.
12 Medium	Goal 2: Increase the State's Capability to Provide and Assist Locals with Mitigation Opportunities	Objective 2.1: Support mitigation planning at all levels.	Develop standardized rating system for looking at risk, vulnerability and hazards for use as a template in local PDM Plan updates.

4.2 MITIGATION FUNDING SOURCES

Funding for mitigation projects can come from a multitude of sources. Some sources may be specifically designed for disaster mitigation activities, while others may have another overarching purpose that certain mitigation activities may qualify for. The majority of the funding sources are recurring through legislation or continued funding. Some, however, may be from an isolated instance of financial support. Whenever possible, creative financing is encouraged. Often, additional funding sources are found through working with other agencies or businesses to identify common or complementary goals and objectives.

4.2.1 Current Mitigation Funding

Presently, mitigation in Montana is funded through a number of sources, primarily federal. These sources, though, are often met with a match of in-kind services. A description of each of the sources can be found in **Table 4.2-1**.

Table 4.2-1 Current Mitigation Funding Sources

Name	Description	Agency	Typical Funding
Community Assistance Program (CAP)	Provides funding to States to assist communities in complying with NFIP requirements. Managed by Montana DNRC.	FEMA, NFIP	\$95,000 per year
Dam Safety Program	Provides funding to the State to promote dam safety through emergency action plans and exercises. Managed by Montana DNRC.	FEMA, State	\$117,000 per year federal and \$106,000 per year state
Flood Mitigation Assistance Program (FMA)	Provides pre-disaster funding for repetitive flood loss property reduction. Since many homeowners are not interested in these opportunities, often the funds go unused. Managed by Montana DNRC.	FEMA	About \$100,000 per year
Hazard Mitigation Grant Program (HMGP)	Provides post-disaster mitigation funding. Managed by Montana DES.	FEMA	\$132,477 average per year, \$298,073 average per disaster
Homeland Security Grants	Through multiple grants, provides funding for homeland security activities identified in the state and local strategic plans. Some projects can be considered mitigation. Managed by Montana DES.	DOJ, DHS	\$45M from 2002-2005 including \$1M for planning and \$6.5M for security and prevention
Individual Assistance (IA)	Following a disaster, funds can be used to mitigate hazards when repairing individual and family homes.	FEMA/State	N/A
Map Modernization Program	Provides funding to establish or update floodplain mapping. Managed by Montana DNRC.	FEMA, NFIP	\$30,000 for Phase 1 in 2003
National Fire Plan (NFP)	Provides pre-disaster funding for primarily wildland fire mitigation, but also planning for all hazards. Managed by DNRC.	U.S. Land Management Agencies	\$3M in 2003, \$89K in 2004, \$1.2M in 2007
Pre-Disaster Mitigation Competitive Grants (PDM-C)	Provides grants through a competitive process for specific mitigation projects, including planning. Managed by Montana DES.	FEMA	\$6.3M from 2005 to 2007
Pre-Disaster Mitigation Program (PDM)	Previously provided pre-disaster funding for mitigation planning and projects. Managed by Montana DES.	FEMA	\$520,000 in Fiscal Years 2002 & 2003
Public Assistance (PA)	Following a disaster, funds can be used to mitigate hazards when repairing damages to a public structure or infrastructure. Managed by Montana DES.	FEMA/State	N/A
Reclamation and Development Grants Program	Provides funding from the interest income of the Resource Indemnity Trust Fund to local governments for dam safety and other water related projects. Managed by DNRC.	State, DNRC	\$3,000,000

4.2.2 Other Potential Mitigation Funding

Additional funding sources may exist that can be used to advance mitigation priorities. These sources, although, not explicitly used for mitigation, can be used to fund certain mitigation activities. In the future, these funding sources will be pursued whenever possible. In some cases, these funding sources have been used in the past and are currently being used in some local communities. A list of alternative funding sources can be found in **Table 4.2-2**.

These lists of potential funding sources are certainly not all inclusive. Many opportunities for mitigation funding exist both in the public and private sectors such as foundations and philanthropic organizations. New funding mechanisms are constantly being created while others are drying up. The funding sources targeted will depend on the specific project needing to be financed. Through continuous creativity and research, opportunities for mitigation in Montana will continue.

Table 4.2-2 Alternative Mitigation Funding Sources

Name	Description	Agency
AmeriCorps	Provides funding for volunteers to serve communities, including disaster prevention.	Corporation for National & Community Service
Community Development Block Grant (CDBG)	Often following a disaster, the state will receive a CDBG Supplement intended to do mitigation projects in the affected areas. In this instance, DES coordinates with the MT Dept of Commerce.	Montana Department of Commerce
Clean Water Act Section 319 Grants	Provides grants for a wide variety of activities related to non-point source pollution runoff mitigation.	EPA
Economic Development Administration (EDA) Grants and Investments	Invests and provides grants for community construction projects, including mitigation activities.	U.S. Department of Commerce, EDA
Emergency Watershed Protection	Provides funding and technical assistance for emergency measures such as floodplain easements in impaired watersheds.	USDA, NRCS
Environmental Quality Incentives Program	Provides funding and technical assistance to farmers and ranchers to promote agricultural production and environmental quality as compatible goals.	USDA, NRCS
Forest Land Enhancement Program	Provides educational, technical, and financial assistance to help landowners implement sustainable forestry management objectives	U.S. Forest Service, DNRC
Housing and Urban Development (HUD) Grants	Provides a number of grants related to safe housing initiatives.	U.S. Department of Housing and Urban Development (HUD)
National Wildlife Wetland Refuge System	Provides funding for the acquisition of lands into the federal wildlife refuge system.	U.S. Fish, Wildlife, & Parks
North American Wetland Conservation Fund	Provides funding for wetland conservation projects.	U.S. Fish, Wildlife, & Parks
NRCS Conservation Programs	Provides funding through a number of programs for the conservation of natural resources.	USDA, NRCS
Partners for Fish and Wildlife	Provides financial and technical assistance to landowners for wetland restoration projects in "Focus Areas" of the state.	U.S. Fish, Wildlife & Parks
Planning Assistance to States	Provides assistance to States in the planning for the development, utilization, and conservation of water and related land resources.	USACE
Renewable Resource Development Grant	Provides funding to protect, conserve, or develop renewable resources, including water.	Montana DNRC, Conservation and Resource Development Division

Table 4.2-2 Alternative Mitigation Funding Sources

Name	Description	Agency
Rural Development Grants	Provides grants and loans for infrastructure and public safety development and enhancement in rural areas.	USDA, Rural Development
Rural Fire Assistance Grant (RFA)	Funds fire mitigation activities in rural communities	National Interagency Fire Center
SBA Pre-Disaster Mitigation Loan Program	Provides low-interest loans to small businesses for mitigation projects.	US Small Business Administration (SBA)
Small Flood Control Projects	Authority of USACE to construct small flood control projects.	USACE
Streambank & Shoreline Protection	Authority of USACE to construct streambank stabilization projects.	USACE
Wetland Program Development Grants (WPDGs)	Provides funding for studies related to water pollution prevention.	EPA

The concept of a Private Advisory Group has also been proposed. This group would represent the interests of private industry, small and large businesses, and individuals on the State Hazard Mitigation Team. In addition, this group could generate private funds for mitigation projects.

4.3 STATE CAPABILITY ASSESSMENT

Montana is a large, diverse state. From the mountainous areas of the west to the open plains in the east, the state varies in climate, terrain, and hazards from one area to the next. This diversity is both an asset and a challenge when it comes to mitigation. The challenges of mitigation in a diverse state arise because what may work in one community may not work in another and priorities may vary significantly from county to county. This variety of priorities and projects, however, requires local governments to ultimately decide what mitigation measures and/or actions their community really needs. This process encourages creativity, effectiveness, and high levels of local involvement when it comes to mitigation projects. With this perspective in mind, mitigation is driven by the local governments and individuals in Montana. They typically initiate, develop, and implement mitigation projects.

The state still plays an important role in creating opportunities, coordinating, and supporting mitigation actions. At the state level, mitigation is achieved through a number of departments in a variety of ways. Montana does not have one central mitigation office. Floodplain and fire issues are handled by different divisions within the Department of Natural Resources and Conservation while much of the mitigation grant funding is managed by the Disaster and Emergency Services Division of the Department of Military Affairs. Again, this diversity can sometimes be a challenge, however, involving multiple agencies in mitigation allows for the integration of mitigation into other programs and the opportunity for active participation across state government.

4.3.1 State Mitigation Structure

State Hazard Mitigation Officer (SHMO)

The SHMO in Montana is part of the Department of Military Affairs, Disaster and Emergency Services Division (DES). This SHMO is the only full time employee devoted to mitigation in Disaster and Emergency Services and coordinates the HMGP and PDM programs. A part-time employee also assists the SHMO in managing the HMGP program, as funding allows. The Earthquake Program within DES is coordinated by the Public Information Officer. A

landmark partnership has been developed between the Department of Interior, Bureau of Land Management and Montana Disaster and Emergency Services. Both agencies share similar requirements for mitigation planning. The Pre-Disaster Mitigation planning requirements are quite similar to the Community Wildfire Protection Plan requirements. Therefore, a joint venture between the two organizations has been recognized with additional personnel support for fire mitigation being proposed to integrate the two similar efforts. Presently, the essential responsibilities of the SHMO include:

- Coordinate the Pre-Disaster Mitigation and Hazard Mitigation Grant Programs
- Maintain the Montana Hazard Mitigation Plan
- Maintain the Montana Hazard Mitigation Administrative Plan
- Review local mitigation plans
- Provide mitigation training to state and local officials
- Develop mitigation partnerships
- Lead the State Hazard Mitigation Team

DES District Representatives

The DES District Representative acts on behalf of Montana DES and is primarily responsible for assisting local and tribal government with the development of their emergency management program which includes mitigation planning. The district representative is the main conduit for implementation of various emergency management, federal, state and division initiatives affecting local and tribal government and involves coordinating with other cooperators. There are six DES District Representatives within the state.

State Floodplain Management and Dam Safety

The Department of Natural Resources and Conservation (DNRC), Water Resources Division coordinates the National Flood Insurance Program and the associated Community Assistance Program, Flood Mitigation Assistance Grant, and Community Rating System (CRS) in Montana. The Dam Safety Program is also coordinated by the DNRC and includes the permitting of 95 high-hazard dams within the state. The Water Projects Bureau at DNRC manages 26 high-hazard dams owned by the state. Federal dams are not included in the permitting process.

State Fire Prevention and Education

The Department of Natural Resources and Conservation (DNRC), Forestry Division coordinates the fire mitigation programs in the State of Montana, including the National Fire Plan. The National Fire Plan and associated mitigation programs are managed by one full-time employee and two part-time employees funded by federal grants. DNRC protects 50 million acres of state and private forest and watershed lands.

Homeland Security

The Montana Homeland Security Task Force, chaired by Montana Disaster and Emergency Services (DES), is the key organization coordinating homeland security programs in Montana. Many agencies from across the state are represented on this task force. The Montana Homeland Security Strategic Plan addresses the mitigation opportunities for homeland security. Through this plan, mitigation of terrorist events is coordinated by the Homeland Security staff within DES.

State Hazard Mitigation Team (SHMT)

The SHMT is a team of state and local officials called upon by the SHMO or Governor's Authorized Representative when needed for additional mitigation support. Typically, this additional support is requested following a Presidential Disaster Declaration. The responsibilities of the SHMT include:

- Participating in planning meetings and report development
- Survey post-disaster damage areas and potential project sites
- Coordinate mitigation activities for their agency
- Assist with project selection and development

Mitigation Review Committee

The Mitigation Review Committee is a subcommittee of the State Hazard Mitigation Team. This subcommittee is responsible for the review and selection of mitigation projects, as needed. Its membership is decided upon annually or as needed by the State Hazard Mitigation Team. For additional information on the members and responsibilities of the Mitigation Review Committee, see *Section 5.3.1*.

4.3.2 Pre-Disaster Mitigation Policies, Programs, and Capabilities

Pre-disaster mitigation programs are the cornerstone of mitigation in Montana. Preventing disasters before they occur and not just after they happen is essential to mitigating losses. Historically, Montana has not had a disaster that results in millions of dollars in HMGP funds. Therefore, the pre-disaster mitigation programs are heavily relied on for mitigation funding.

Most of the mitigation efforts in the past three years have been focused on completing the remaining Local PDM Plans. Local jurisdictions with approved plans have completed a number of mitigation projects since 2004; but they have all been Post Disaster HMGP funded projects (See *Section 4.3.3*). Since the 2004 State Plan, state-wide mitigation projects that have been implemented include those funded by FEMA through the PDM-C Program (**Table 4.3-1**) and various fuel mitigation projects funded through the National Fire Plan (See *National Fire Plan and Fire Prevention discussion below*).

Pre-Disaster Mitigation Planning

The Pre-Disaster Mitigation Program for planning is making an impact in Montana. All 56 counties and seven tribes are participating in developing Pre-Disaster Mitigation Plans. As of June 19, 2007, 43 Local PDM Plans had been approved by FEMA (41 county plans and two tribal plans) and 20 plans were in the advanced drafting stage (15 county plans and five tribal plans). The State's approach to reviewing, coordinating and integrating local mitigation plans has allowed for all but three county plans to be included in this State Plan update. All Local PDM Plans will be linked to the State Plan during the next State Plan update cycle in 2010.

Integrating the Local PDM Plans into the State Plan for the 2007 State Plan Update involved: 1) interpreting the local hazard "risk" and presenting this data on statewide maps in the State Plan that are electronically linked to the local plan documents, 2) entering local mitigation projects into a database, 3) categorizing local projects consistent with State Plan goals and, 4) compiling potential losses estimates from the local plans for buildings, society and the economy for each hazard profiled in the State Plan. Appendices with supporting documentation are provided for each DES District (**Appendices B through G**). Integration

of local plans into the State Plan took place over approximately nine months from November 2006 through July 2007. **Appendix I** contains a Local Plan Index that provides the electronic user of this document access to County and Tribal PDM Plans for 59 of Montana's 62 jurisdictions.

In order to improve the local plans, the SHMO and SHMT will standardize the way "risk" is looked at so that a comparable approach can be used in future local plan updates. Local plans may also improve through the availability of district-level mitigation documentation in the State Plan. This will enhance coordination between counties and tribes where hazard vulnerability crosses jurisdictional lines. The State Plan will serve as a reference document for future local plan updates. Local capabilities will be enhanced through the continued technical assistance offered by the SHMO and SHMT.

Pre-Disaster Mitigation Competitive Programs

Since 2004, FEMA has awarded competitive PDM grants (PDM-C) to the State for mitigation planning purposes and to a number of Montana jurisdictions for mitigation construction projects. These projects require a 25 percent local match. **Table 4.3-1** presents a summary of these projects since 2003. For specific grant project, the State uses benefit-cost reviews to determine which projects maximize benefits relative to their cost.

Table 4.3-1 PDM-C Projects Since 2004

Year	Application Title	Name	Non-Federal Share	Federal Share	Federal Share %
2005	Missoula County Grant Creek Flood Mitigation Project	Missoula County	\$1,145,000	\$3,000,000	75%
2005	Powell County/City of Deer Lodge Flood Hazard Mitigation Project	Powell County	\$667,409	\$2,002,228	75%
2005	Blacktail Deer Creek City/County Flood Mitigation Project	Beaverhead County	\$160,260	\$435,000	75%
2005	Remaining and Unfunded Montana Communities Planning Grant Application	MT DES	\$69,500	\$208,500	75%
2005	Montana University System Multi-Hazard Planning	Montana University System	\$85,006	\$255,017	75%
2006	State of Montana Multihazard Mitigation Plan Update	MT DES	\$37,484	\$112,438	75%
2007	Petroleum County PDM Plan Update 2007	Petroleum County	\$694	\$6,250	90%
2007	Northeastern Montana PDM Plan Update 2007	Valley County	\$9,167	\$27,500	75%
2007	Helena South Hills Fuel Reduction 2007	Lewis & Clark County DES	\$34,319	\$102,956	75%
2007	Butte-Silver Bow County Geological Hazards	Butte-Silver Bow City/County	\$70,204	\$210,329	75%
TOTAL			\$1,134,043	\$6,360,218	-

Capabilities:

- The PDM planning program has elicited a high participation rate by Montana counties and tribes.
- Alternative sources of funding have been identified at the state and local levels to support this program.
- Communities have found assessing their hazards to be quite beneficial and informative.

Limitations:

- Only one person at the State level is devoted to reviewing plans and projects and providing training for this program at the State level. Montana DES should request

additional staff for the SHMO during each budget cycle in order to improve PDM outreach and support for the entire state.

- At times, more counties/tribes have been interested in participating than funding to support their efforts has been available.

National Fire Plan and Fire Prevention

Fire mitigation programs coordinated by the State go through the DNRC, Forestry Division. One full-time and two half-time employees coordinate the National Fire Plan funding from the U.S. Forest Service and other related prevention and education programs. A State Steering Committee assists with making decisions for the program. Since 2004, over 700 fuel mitigation projects have been completed in Western Montana through funding provided by National Fire Plan contributing agencies, as discussed below.

In 2007, Montana received nearly \$1.2 million in federal funding for hazardous fuel mitigation. Six of 10 proposals submitted by the Montana DNRC to the Western Wildland Urban Interface (WWUI) grant program were successful. These projects represent hazardous fuels reduction treatments on approximately 1,900 acres of private property within the WUI in Missoula, Flathead, Mineral, Ravalli, Lincoln, Sanders, Lewis and Clark, and Stillwater Counties. The projects are offered as a cost-sharing partnership with homeowners, who not only pay for part of the work, but must agree to maintain the project into the future. Most projects also contain an education element to provide resources for homeowners about how to protect their property from wildfires. The USDA Forest Service provides the funds, which are delivered to grant recipients through state foresters and their network of project partners. Montana DNRC has a network of local government partners and other organizations who manage fuel mitigation projects at the local level.

The Community Protection Fuels Mitigation (CPFM) Grant Program provides cost-share assistance in Montana for fuels treatment on non-federal lands adjacent to federal lands that are also scheduled for treatments. It provides an opportunity for landscape-level treatment across ownerships. DNRC administers this program in direct partnership with the Forest Service.

Fuel mitigation projects have also been funded by BLM directly through Community Assistance Agreements to local entities such as TRICO (Lewis and Clark, Jefferson, and Broadwater Counties), the Seeley-Swan coalition, and others.

Capabilities:

- The potential for significant mitigation funding exists, if the projects qualify for and are selected for the nationally competitive National Fire Plan programs.
- Other federal land management agencies have similar funding sources available and work to complete fire mitigation projects directly with the local communities.
- State fire suppression costs can be used as match for these federal grants.
- The National Fire Plan program has created a well-coordinated mitigation system for planning and projects at the state level.
- Numerous partnerships have been and continue to be developed through this program.

Limitations:

- Funding for fire mitigation varies greatly from year to year due to the competitive nature of the program. No baseline funding exists for fire mitigation.
- The State of Montana does not have a state funded fire mitigation initiative.

Earthquake Program

This program, coordinated by the DES Public Information Officer, is primarily a public education and outreach program. Each October is Earthquake Preparedness Month in Montana, and media outlets inform residents of preparedness and mitigation techniques they can take. Briefings and training sessions have also been conducted through this program. The HMGP program has previously funded earthquake mitigation projects in coordination with the public outreach of this program. Montana Bureau of Mines and Geology, Earthquake Studies Office heavily supports this program through research, education, and outreach.

Capabilities:

- Coordinating this program with the Public Information Officer position allows for extensive earthquake preparedness outreach.

Limitations:

- Specific funding for mitigation projects is not present at the state level for this program, and therefore, projects are dependent on grant programs.
- Only a limited amount of time can be devoted to this program as it is managed by an employee with additional responsibilities.

National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Through funding from the Community Assistance Program, the State NFIP is coordinated by the Department of Natural Resources and Conservation. In Montana, 128 out of 139 communities participate in the National Flood Insurance Program. Twelve of those communities participate in the CRS program (**Table 4.3-2, Figure 4.3-1**). Those communities that have an identified flood hazard but are not part of the NFIP are listed in **Table 4.3-3** and shown in **Figure 4.3-2**.

Since 1978 over \$5.3 Million has been paid out in flood insurance claims in the State of Montana, and as of February 2007, 3,499 policies have existed insuring over \$525 Million in property. This program, specifically managed at the local level, is supported by the State Floodplain Manager, part of the Department of Natural Resources and Conservation, Water Resources Division.

Capabilities:

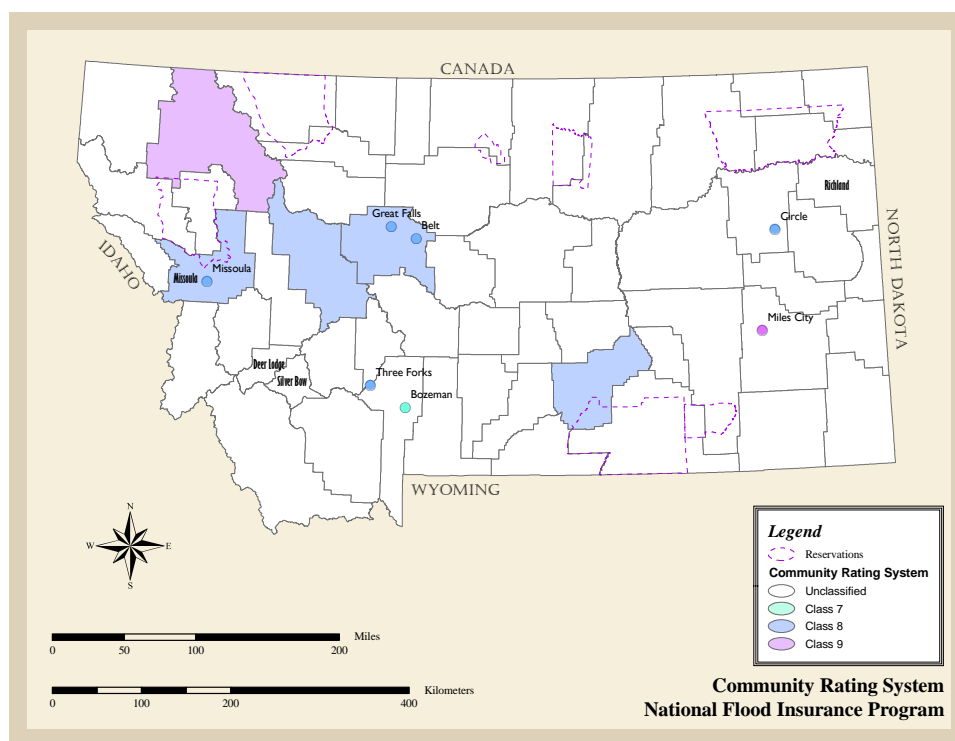
- The NFIP allows the State to assist counties and cities with floodplain problems.
- The majority of Montana lands are regulated as part of the NFIP.

Limitations:

- Very little funding is available for NFIP education.
- Counties and cities are limited in staffing. Often the local floodplain manager has multiple duties and only issues one or two floodplain permits a year.
- Local floodplain managers, because of their other duties and infrequent floodplain development, often have very little training in the NFIP.

Table 4.3-2 Community Rating System (CRS) Participating Communities¹⁹

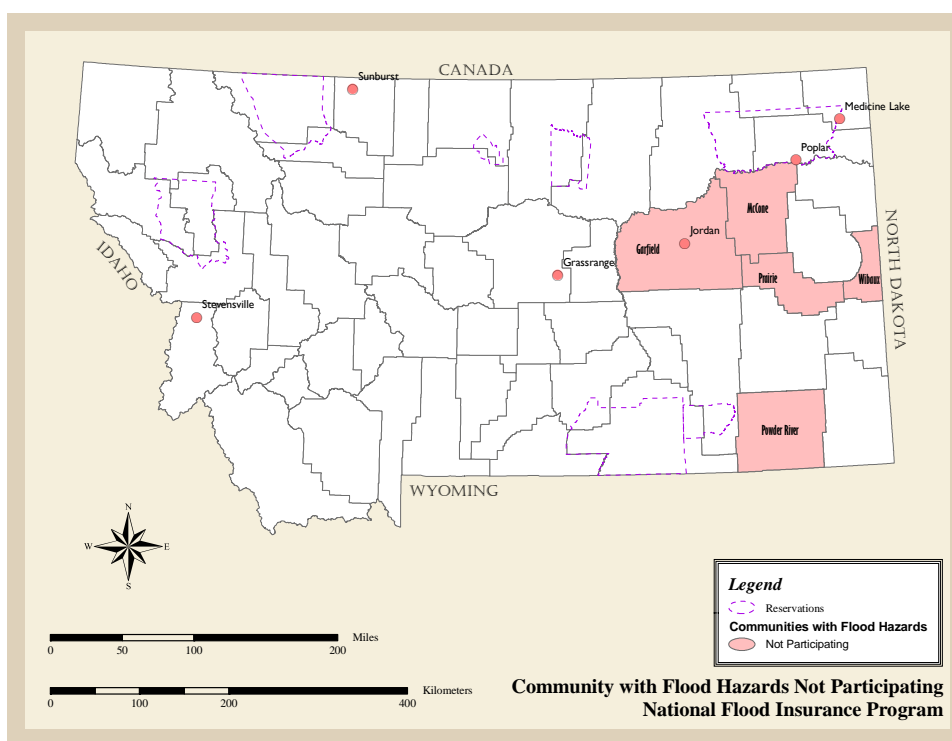
Community	CRS Class
City of Bozeman	Class 7
City of Great Falls	Class 8
Town of Belt	Class 8
Cascade County	Class 8
Town of Circle	Class 8
Lewis & Clark County	Class 8
Missoula County	Class 8
City of Missoula	Class 8
Town of Three Forks	Class 8
Yellowstone County	Class 8
Flathead County	Class 9
City of Miles City	Class 9

Figure 4.3-1 Communities Participating in the National Flood Insurance Program Rating System

¹⁹ National Flood Insurance Program (NFIP), Community Rating System (CRS), Federal Emergency Management Agency, Federal Insurance Administration, Washington, DC, May 1, 2007.
<http://www.fema.gov/business/nfip/crs.shtm>

Table 4.3-3 Communities with Flood Hazard Areas Not Participating in the NFIP²⁰

Community	Effective Date
Garfield County	03/20/1980
Town of Grass Range	09/21/1993
Town of Jordan	06/27/1976
McCone County	06/04/2008
Town of Medicine Lake	07/09/1977
City of Poplar	06/04/2008
Powder River County	05/15/1980
Prairie County	05/08/1980
City of Stevensville	09/07/1999
Town of Sunburst	01/10/1976
Wibaux County	03/04/1988

Figure 4.3-2 Montana Communities with Flood Hazards Not Participating in the NFIP

²⁰ National Flood Insurance Program Community Status Book, Federal Emergency Management Agency, Federal Insurance Administration, Washington, DC, July 9, 2007. <http://www.fema.gov/fema/csb.shtml>

Map Modernization Program

The Map Modernization program (Map Mod) is a funded initiative put in place by Congress to update floodplain mapping across the country. In Montana, this program is being implemented in three phases. The first phase at \$30,000 is to develop a business plan for the state's map modernization program. Phase 2, currently in the application stages for \$90,000, is to add an employee to manage the program. Phase 3 is to actually map new areas and digitize existing maps. This program is managed by the Department of Natural Resources and Conservation, Water Resources Division.

Map Mod is currently in Phase 3. There is a full time Map Modernization Management Support position and a half time outreach specialist funded through FEMA. There are approximately 10 projects that have completed the DFIRM process and are effective and approximately 19 on-going projects that are being mapped as single jurisdictions, partial county-wide or full county-wide DFIRMS. Of those Missoula, Flathead, Yellowstone, Cascade, and Lewis and Clark counties are being mapped through the Cooperating Technical Partners (CTP) program, which means that FEMA obligates the funds directly to the DNRC who contracts out the mapping work. It is anticipated that DNRC will start a partial county-wide mapping project in Fergus County in FY 2007 through the CTP program. Priorities for FY 2008 are Lake, Ravalli and Butte-Silver Bow counties.

Capabilities:

- Nationally, Congress has allocated a significant amount of funding for this initiative.
- Currently, the program does not require State match which eliminates the greatest limitation in similar programs.

Limitations:

- Montana is not as competitive as other states for national flood funding due to our low population and historic damages.
- With the State population increasing and explosive growth in some places, the mapping is often outdated and cannot keep up with the growth.
- To maximize the continuity of the program, state funding is needed to supplement the federal funding.

Flood Mitigation Assistance Program

In a typical year, about \$100,000 in FMA funds are available for Montana projects, however, most of these funds typically go unspent due to a lack of homeowner interest in the program. This program restricts mitigation activities to NFIP repetitive loss properties. With only 43 repetitive loss properties in Montana, a limited number of opportunities exist, and many of those opportunities are lost due to the 25 percent match requirement. Without state funds to meet the match requirements, the match responsibility is passed on to the homeowner. Frequently, the homeowner is not able or willing to provide the match.

Capabilities:

- The program is focused on the most vulnerable structures based on flood insurance losses.

Limitations:

- The 25 percent match represents a significant barrier for many homeowners.
- With the program being restricted to repetitive loss properties, relatively few opportunities for mitigation exist.

Dam Safety Program

The dam safety program oversees and regulates the major, non-federal or tribal dams in Montana. Ninety-two dams are currently regulated by the State of Montana; however, the National Inventory of Dams listed about 2,800 dams in Montana. Many of the dams regulated by the State are required to have permits and emergency action plans. This program is managed by the DNRC, Water Resources Division.

Capabilities:

- The dam safety program provides regulations and standards for most high impact dams, and therefore, ensures an initial level of safety.

Limitations:

- Over 2,700 significant and low hazard dams in Montana are not regulated according to the National Inventory of Dams. In many cases, maintenance and repair may be needed.

Homeland Security

Funding for Homeland Security vastly outweighs the funding available for traditional hazard mitigation, with over \$65 million in grant funding from 2001-2006. This funding is primarily directed toward pre-identified preparedness activities such as training, exercises, and equipment. From a mitigation perspective, since terrorism is such a highly uncertain and variable type of hazard, most activities that are being conducted through the homeland security program are mitigation in some form. Preparing our responders and gathering intelligence may mitigate an event from occurring or may reduce the impacts from an event. In this sense, these activities can be considered mitigation, although, not in the traditional sense of the word.

Capabilities:

- An enormous amount of funding is being used to prepare our state to prevent and respond to a terrorist attack.
- Much of the equipment and training being conducted for homeland security purposes can also be used for any hazard or event, natural or man-made.

Limitations:

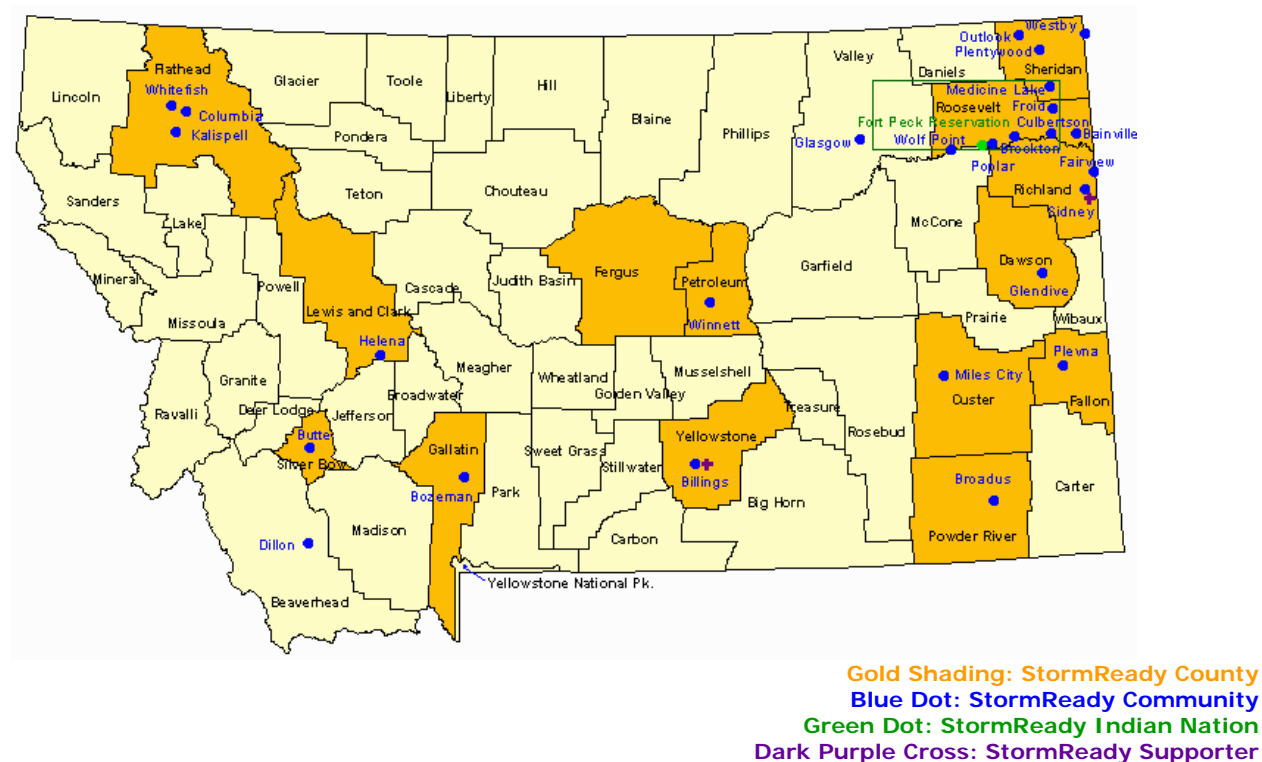
- Homeland security funds are quite specific in what they can be used for and do not allow for a lot of flexibility.
- Only actions identified in the local and state strategic plans can be funded.

National Weather Service Initiatives

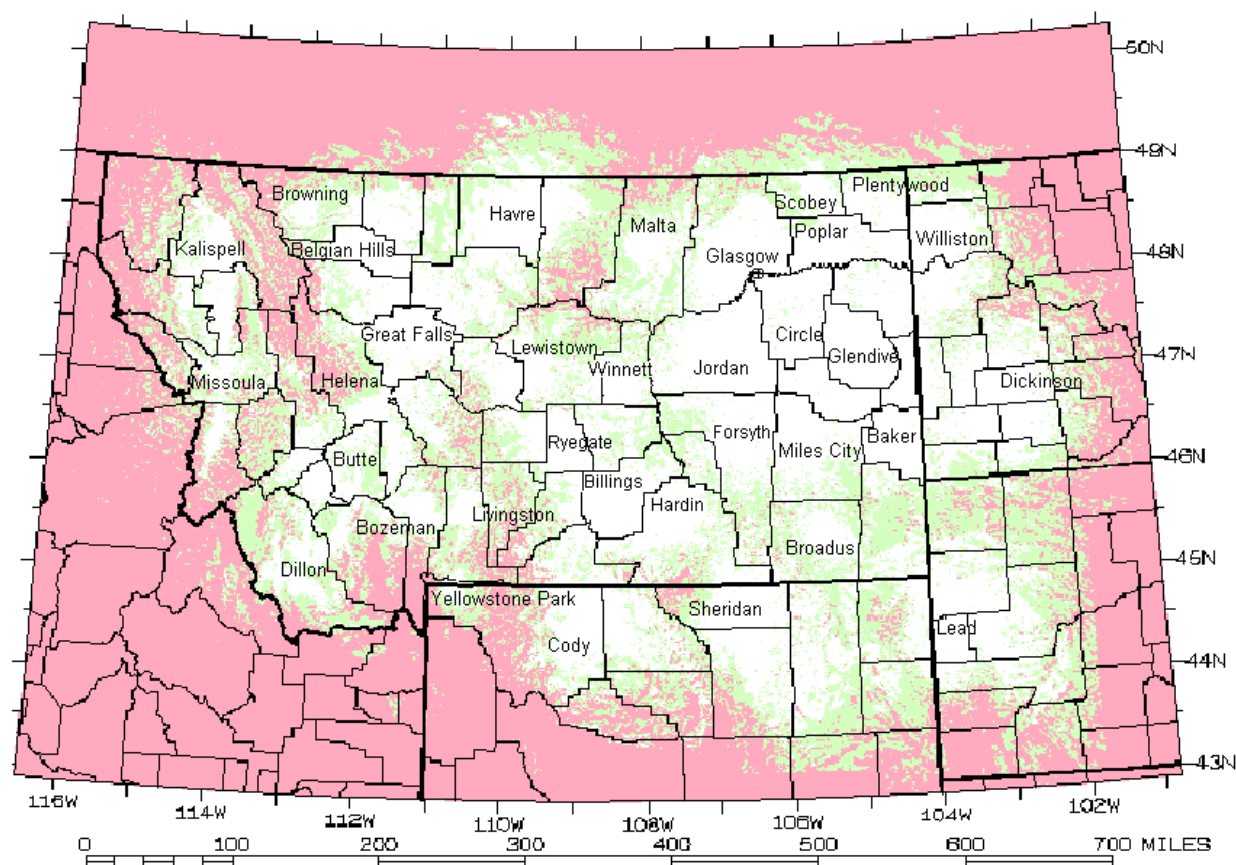
The National Weather Service (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community. The NWS initiatives, described below, are making great strides in getting the hazard mitigation message out to citizens of Montana.

The ***StormReady Program*** started in 1999 to help communities develop the communication and safety skills needed to save lives and property – before and during hazard events. StormReady helps community leaders and emergency managers strengthen local safety programs through better planning, education, and awareness. Montana has 41 StormReady Designations (**Figure 4.3-3**) including 14 counties, 27 communities, one Indian Nation, and two supporters.

Figure 4.3-3 Montana Storm Ready Counties, Tribes and Communities



The **NOAA Weather “All Hazard” Radio** (NWR) program is provided as a public service by the National Oceanic and Atmospheric Administration (NOAA). NWR is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest NWS office. In conjunction with Federal, State, and Local Emergency Managers and other public officials, NWR also broadcasts warning and post-event information for all types of hazards – including natural (such as earthquakes or avalanches), environmental (such as chemical releases or oil spills), and public safety (such as AMBER alerts or 911 Telephone outages). **Figure 4.3-4** shows the NOAA weather radio sites and coverage in Montana.

Figure 4.3-4 NOAA Weather Radio Sites and Coverage in Montana.

The coverage in **Figure 4.3-4** is shown in a three color format, which relates to three estimated signal levels, as follows: White: Signal level of greater than 18dBuV: Reliable coverage; Green: 0dBuV to 18dBuV: picking up a signal is possible but unreliable; and, Pink: Less than 0dBuV: Unlikely to receive a signal.

CoCoRaHS is an acronym for the Community Collaborative Rain, Hail and Snow Network, a program sponsored by NOAA. CoCoRaHS is a grassroots volunteer network of weather observers working together to measure and map precipitation (rain, hail and snow) in local communities. By using low-cost measurement tools, stressing training and education, and utilizing an interactive web-site, they provide accurate high-quality precipitation data to observers, decision makers and other end-users on a timely basis.

Winter Awareness Week, Severe Weather Awareness Week are two other NWS public outreach programs aimed to mitigate the effects of natural hazards through education.

4.3.3 Post-Disaster Mitigation Policies, Programs, and Capabilities

Hazard Mitigation Grant Program

Following a Presidential Declared Disaster, Montana has historically received 15 percent of eligible disaster costs in funding for mitigation activities. This program, coordinated through DES by the SHMO and a part-time mitigation specialist, has funded 54 mitigation projects totaling over \$2.3 million following 8 disasters since 1986. Typically, the HMGP program is opened up for all counties, not just those in the disaster area, and the projects are not restricted to those hazards involved in the disaster. This allows for maximum flexibility and quality in the projects submitted for funding. **Table 4.3-4** shows the various disasters and associated HMGP funding. There have been no Presidential Declared Disasters in Montana since 2002.

Table 4.3-4 HMGP Funding by Disaster

Date	FEMA Disaster #	Location	Disaster Type	HMGP funding
February 1996	1105	Western Montana	Flooding, Winter Storms	\$268,598
March 1996	1113 ²¹	Milk River, Northern Montana	Flooding, Spring Storms (road, culvert, and bridge damage)	\$207,000
Spring/Summer 1997	1183 ²²	Missouri and Yellowstone Rivers	Flooding (roadway and infrastructure damage)	\$883,110
Summer 2000	1340 ²³	Statewide	Wildfire	\$290,766
Fall 2000	1350 ²⁴	Eastern Montana	Winter Storms (heavy snow loads, drifting, power outages)	\$284,005
Spring 2001	1377 ²⁵	Big Horn County, Crow Reservation	Winter Storms (heavy snow loads, power outages)	\$105,770
June 2001	1385 ²⁶	Gallatin, Missoula, and Powell Counties	Spring Storms (heavy snow loads, power outages)	\$137,349
June 2002	1424 ²⁷	Northern Montana	Spring Storms, Flooding (heavy snow loads and rain, power outages, road damage)	\$207,984
			TOTAL	\$2,384,582

Capabilities:

- As many projects as possible are funded through HMGP, and the program is typically opened up to the entire state and all identified natural hazards following a disaster.

Limitations:

- Montana is required to follow the same procedures as a larger state but with generally less funding available for projects and their management.
- With historically few declared disasters in Montana, mitigation funding from HMGP is both sporadic and very limited.

²¹ Hazard Mitigation Survey Team Report, FEMA-1113-DR-MT, FEMA Region VIII, June 1996.

²² Interagency Hazard Mitigation Team Early Implementation Strategy Report in Response to DR-1183-MT, August 1997.

²³ Hazard Mitigation Survey Team Report, FEMA-1340-DR-MT, FEMA Region VIII, Declared August 30, 2000.

²⁴ Hazard Mitigation Survey Team Report, FEMA-1350-DR-MT, FEMA Region VIII, March 2001.

²⁵ Hazard Mitigation Survey Team Report, FEMA-1377-DR-MT, FEMA Region VIII, Declared May 28, 2001.

²⁶ Hazard Mitigation Survey Team Report, FEMA-1385-DR-MT, FEMA Region VIII, October 2001.

²⁷ Hazard Mitigation Survey Team Report, FEMA-1424-DR-MT, FEMA Region VIII, May 2003.

Public and Individual Assistance (PA and IA) Mitigation

When Presidential disaster PA and IA funds become available for repairs to public and private structures and infrastructure, mitigation opportunities are taken whenever possible. Although not a separate program, mitigation is conducted following a disaster through the recovery programs. Public assistance and individual assistance officers are trained in mitigation and will directly and indirectly mitigate hazards when repairing the damages. This mitigation is an integrated part of the disaster recovery and cannot be easily put into dollar amounts.

Capabilities:

- Mitigation during recovery allows for “cheaper” mitigation because the mitigation is done while repairing damages.
- Immediately following a disaster, the public and local officials may be more willing to invest in mitigation due to both increased awareness and public pressure.

Limitations:

- Typically, following a disaster, recovery, and not mitigation, is the primary objective.
- The mitigation costs cannot be easily separated from the recovery costs.
- Identification of mitigation opportunities depends on the recovery officers’ abilities to notice them.

4.3.4 Evaluation of State Laws and Regulations

An evaluation of Montana laws and regulations was conducted to identify those sections that relate to mitigation. Many laws that can be related to mitigation are “buried” in various sections, such as Montana Code Annotated (MCA), Title 20, Chapter 6, Part 6 (MCA 20-6-621) which states that school locations are to meet building codes. Only the major sections as they pertain to mitigation will be listed here. See **Table 4.3-5** for specific legislation.

Table 4.3-5 Montana Laws and Regulations Related to Mitigation

Reference	Description	Capabilities	Limitations
MCA Title 7	Local Government	<ul style="list-style-type: none"> ▪ Allows local governments to construct public buildings, utility services, roads, and bridges ▪ Gives local government the right to adopt their own building codes 	<ul style="list-style-type: none"> ▪ Does not require local building codes or enforcement
MCA 10-3	Disaster and Emergency Services	<ul style="list-style-type: none"> ▪ Establishes state and local emergency management organizations and responsibilities 	<ul style="list-style-type: none"> ▪ Mentions mitigation in a very limited fashion
MCA 17-7-2	Long Range Building Program	<ul style="list-style-type: none"> ▪ Establishes the Long Range Building Program for State facilities ▪ Consolidates and prioritizes requests for significant building improvements and new construction 	<ul style="list-style-type: none"> ▪ Does not require the consideration of disaster prevention or mitigation.
MCA 50-3	State Fire Prevention and Investigation Program	<ul style="list-style-type: none"> ▪ Establishes State Fire Prevention Program ▪ Establishes fire inspection program for State buildings 	

Table 4.3-5 Montana Laws and Regulations Related to Mitigation

Reference	Description	Capabilities	Limitations
MCA 50-60	Building Construction Standards	<ul style="list-style-type: none"> Authorizes State Building Code Allows for local county, city, or town building codes 	<ul style="list-style-type: none"> Except for the energy, plumbing, and electrical codes, the State Building Code is not applicable for residential structures less than five dwelling units, unless required by local jurisdictions.
MCA 50-61	Fire Safety in Public Buildings	<ul style="list-style-type: none"> Establishes fire safety regulations for public buildings 	
MCA 50-62	Fire Hazards	<ul style="list-style-type: none"> Allows for remediation, removal, or demolish of structures that are considered fire hazards 	
MCA 50-79	Nuclear Regulation	<ul style="list-style-type: none"> Establishes regulations for sources of ionizing radiation 	
MCA Title 60	Highways and Transportation	<ul style="list-style-type: none"> Authorizes maintenance and creation of State roads and roadway infrastructure 	<ul style="list-style-type: none"> No requirements for the mitigation of hazards
MCA Title 67	Aeronautics	<ul style="list-style-type: none"> Provides regulations for airports and aircrafts 	
MCA Title 69	Public Utilities and Carriers	<ul style="list-style-type: none"> Establishes requirements for utility providers, including the construction of such facilities 	<ul style="list-style-type: none"> Does not require hazard considerations
MCA 75-1	Montana Environmental Policy Act	<ul style="list-style-type: none"> Establishes procedures for environmental reviews 	
MCA 75-2	Air Quality	<ul style="list-style-type: none"> Establishes air quality regulations 	
MCA 75-5	Water Quality	<ul style="list-style-type: none"> Establishes water quality regulations 	
MCA 75-6	Public Water Supplies, Distribution, and Treatment	<ul style="list-style-type: none"> Establishes regulations for the construction and operation of public water supplies and wastewater 	
MCA 75-7	Aquatic Ecosystem Protections	<ul style="list-style-type: none"> Requires the protection of streambeds and lakeshores 	
MCA 75-20	Montana Major Facility Siting Act	<ul style="list-style-type: none"> Establishes regulations regarding the placement of major energy production or transmission facilities 	<ul style="list-style-type: none"> Although considerations for the public's health and safety are provided, this act does not require an evaluation of natural or man-made hazards of the facility location.
MCA 76-1	Growth Policy	<ul style="list-style-type: none"> Requires local governments to develop growth policies by October 2006. Growth policies are the steering documents for zoning ordinances and subdivision regulations. 	<ul style="list-style-type: none"> Does not require the consideration of natural hazards. A bill requiring a strategy for addressing natural hazards failed in 2001. Growth policies are not regulatory and do not have authority to deny land use.
MCA 76-2	Planning and Zoning	<ul style="list-style-type: none"> Allows local governments to establish and manage zoning districts 	<ul style="list-style-type: none"> Does not establish statewide zoning or require it at the local level
MCA 76-3	Montana Subdivision and Platting Act	<ul style="list-style-type: none"> Requires local governments develop subdivision regulations and enforcement Establishes policy to ensure subdivisions are in the public interest 	<ul style="list-style-type: none"> Does not establish statewide standards for hazards

Table 4.3-5 Montana Laws and Regulations Related to Mitigation

Reference	Description	Capabilities	Limitations
MCA 76-5	Floodplain and Floodway Management	<ul style="list-style-type: none"> Establishes state floodplain management program and regulations Requires a Flood Protection Elevation of two feet above the 100-year Base Flood Elevation Establishes a Floodway Obstruction Removal Fund 	
MCA 76-6	Open-Space Land and Voluntary Conservation Easement Act	<ul style="list-style-type: none"> Provides regulations for open space designations and compensation 	<ul style="list-style-type: none"> Does not emphasize open space in hazardous areas
MCA 76-11-1	Natural Resource Protection from Fire	<ul style="list-style-type: none"> Directs DNRC to protect natural resources from fire 	
MCA 76-13	Timber Resources	<ul style="list-style-type: none"> Provides for the protection of forest resources Establishes regulations to prevent uncontrolled fire starts Allows for tree disease and insect control 	
MCA 76-14	Montana Rangeland Resources Act	<ul style="list-style-type: none"> Allows for sagebrush and weed management 	<ul style="list-style-type: none"> Does not specifically mention fire management
MCA 85-15	Montana Dam Safety Act	<ul style="list-style-type: none"> Allows for safe construction of dams Provides authority for dam permitting, inspection, and repair 	
MCA 90-15	Natural Resource Information System	<ul style="list-style-type: none"> Authorizes the development of a natural resource information system and a natural heritage program 	

The State laws in the Montana Code Annotated (MCA) are then translated into the Administrative Rules of Montana (ARM). This document specifies the rules as they relate to the MCA. For example, the International Building Code (IBC), 2006 Edition is adopted as the state building code through ARM 24.301. Individual agencies are responsible for identifying and addressing the shortcomings with mitigation in their own agency rules.

4.3.5 Development in Hazard Prone Areas

Although experiencing declining populations in many eastern rural counties, Montana has been experiencing rapid population growth in the south-central and western parts of the State since the 1930's. Currently, some locations in the state are undergoing rapid growth. With that growth comes challenges in hazard mitigation. Many hazards, such as winter storms, wind, hail, drought, and terrorism, are not limited to specific areas and the vulnerability associated with the population growth certainly is increasing. The impact of future development is discussed for each hazard in *Section 3.3*.

Western Montana has been the area with the most concentrated growth in recent years. This section of the State includes several known and unknown seismic faults with prehistoric and historic major earthquake events, and therefore, growth is taking place in high probability earthquake hazard areas. Currently, little zoning or development regulations in fault areas is occurring.

The state floodplain requirement of a freeboard of two feet reduces the vulnerability of new development in the mapped flood zones. This proactive approach to floodplain management helps in making new construction less prone to flood damages. However, the program is

only as good as the mapping, and in some instances, development may be occurring in unmapped, flood prone areas.

Of greatest concern and magnitude, however, is the development occurring in the wildland/urban interface areas. With the greatest wildland fire hazards existing in western Montana and much of the growth occurring in this part of the State, development is occurring in the hazard prone areas. Mitigating this problem are the local planning boards and fire departments. Most subdivisions undergo reviews for fire safety. In many cases, the development cannot be completely prevented, but measures are put in place such as water supply and roadway requirements that may help reduce the risk through fire suppression during an event. Forested mountains continue to be places that are popular to live and accelerated growth continues in these areas.

Several laws were passed during the 2007 legislative session that move Montana toward avoiding future development in hazard areas²⁸. Senate Bill 201 creates a smart growth planning process that cities and counties can use together to plan for efficient growth inside and adjacent to cities and towns. Previously there was no clear process in the law that cities and counties could follow to get ahead of infrastructure and other impacts of new growth inside cities and on the urban fringe. The lack of a clear planning process tied to zoning to implement the plans often led to a contentious process for new development. No one knew what standards would be applied – not local government officials, the developer or the surrounding neighbors. Senate Bill 201 allows a streamlined subdivision review if a city or county engages its public in planning and adopts zoning that implements the plans. They also must avoid or mitigate adverse impacts on wildlife, waters, the natural environment, health and safety, and local services.

Senate Bill 51 requires that growth policies identify where the WUI areas are located to help in planning to protect people and property from wildfire. More development has been taking place, and much more is projected, in rural locations like wooded hills and mountainsides where wildfire is a natural and relatively common phenomena. The legislation is an important step to help local and state government get ahead of wildfire threats and spiraling fire-fighting costs. More homes to protect in the WUI means higher taxes for all Montanans, unless the new homes are kept out of areas of high wildfire hazard and are required to meet clear water supply, defensible space, access, and construction standards. Senate Bill 51 clearly restates that a subdivision shall be denied if it does not mitigate or avoid threats to public health and safety. It also requires that subdivision regulations protect people and property from wildland fire. It also engages the Department of Natural Resources and Conservation (DNRC) and the Department of Labor and Industry in developing rules and providing incentives to help cities and counties get ahead of growth in the WUI. This will include identifying best planning and land use practices for WUI development. The bill clarifies that counties and cities can regulate fire-related construction techniques – such as requiring sprinklers in certain circumstances or prohibiting cedar shake roofs – through their subdivision regulation if they adopt the Department of Labor and Industry rules authorized by Senate Bill 51.

²⁸ Montana Smart Growth Coalition, 2007. Smart Talk. Spring 2007. Volume 4, No. 1.

4.3.6 State Funding Capabilities

The Disaster and Emergency Services Division of the Department of Military Affairs in Montana has a limited budget to provide the very basic emergency management services. This division with a staff of 23 (including six field representatives) in Fiscal Year 2007 had \$1.148 million for personnel expenses, about \$196,880 for operating expenses (a decrease of \$18,120 from 2004), and zero dollars for equipment (a decrease of \$2,500 from 2004). This minimal budget leaves little room for additional mitigation support. Approximately 50 percent of this budget is funded federally through EMPG funds and the other 50 percent is the state's required match paid from the state's general fund. The remaining EMPG funds are used to fund county and tribal DES coordinators. Most county coordinators are one-half or one-quarter time for Disaster and Emergency Services with other responsibilities. Some have hired coordinators for homeland security grants, however, most have not. Little time and funding is available to these coordinators for mitigation activities. As with DES, the other State departments managing mitigation programs do not have State funds available for mitigation purposes. Available State funds are currently used to provide personnel resources, and in some cases, those personnel resources are also funded through federal funds requiring state match.

Historically, Montana has seen eight-year cycles that feature revenue increases for seven years – with the more rapid growth in the 5th, 6th and 7th years – capped with a revenue drop in the 8th year. General fund revenue grew by more than 10 percent for FY 2004, FY 2005 and FY 2006. FY 2007 revenue continued that trend. Changes to the State budget in the 2007 legislative special session included a smaller increase for public safety programs and increases for public education and property tax reductions. Although the current state fiscal situation is good, funding for mitigation projects will not follow without a significant revision of policy towards hazard mitigation and/or development of a mitigation trust fund to assist local jurisdictions with project match.

Capabilities:

- The full-time SHMO and part-time HMGP coordinator are able to offer project funding through the HMGP and PDM programs, when available.
- Federal mitigation funds are available through a variety of State offices.
- Travel for the SHMO is normally funded through grant administration funds.

Limitations:

- The programs can only grow as large as the personnel able to coordinate them.
- For federal funds, the 25 percent match is often not available.
- A mitigation program budget does not exist except through federal grants for projects.

4.4 LOCAL CAPABILITY ASSESSMENT

Most mitigation projects in the State of Montana begin at the local level. Following a major disaster or a minor event, someone such as a county commissioner, the road crew, or a homeowner notices a problem that can be mitigated. Typically, the local officials will submit a request for mitigation grant funding as it is available. Ultimately, local mitigation projects are created, submitted, and implemented by those who live in the community. These local officials work closely with the SHMO and other State and federal officials in determining the best course of action.

Montana, being a large, mostly rural state, is managed primarily by county government with additional city and town governments in the more developed communities. Each county and tribe in Montana has a Disaster and Emergency Services (DES) Coordinator. These coordinators are typically positions that are not dedicated to emergency management full-time, and most are half or quarter time. Frequently, the coordinator will also have other duties within the county such as the sheriff or the fire chief. Only about 11 of 62 DES coordinators at the county or tribal level are full time. In most cases, these coordinators are also responsible for preparedness, response, recovery, and homeland security coordination. They are assisted by six state DES district representatives who act as liaisons between the State DES office and the county DES coordinators.

A variety of resources exist at the local level to assist in the hazard mitigation effort. Although, many programs and policies are proactive in some communities, others may not be. With each local government developing its own programs and policies, consistency across the state is lacking. **Table 4.4-1** demonstrates some of the more significant efforts at the local level. These efforts were identified through close partnership with the local jurisdictions.

Table 4.4-1 Local Policies and Programs Affecting Hazard Mitigation

Name	Description	Capabilities	Limitations
Building Codes	A minimum State building code exists for all communities; however, several have adopted their own stronger codes.	Implemented and enforced at the local level, structural building codes (some only residential) are in place in over 40 communities. See Figure 4.4-1 for these communities.	Many local jurisdictions have not adopted local building codes, nor do they have the staffing to do so. The State building code does not address structural codes for residences under 5 dwelling units.
Zoning	Statewide zoning does not exist, nor is it required. Many communities have created zoning districts.	Many communities have adopted zoning districts, including those that consider hazard areas. The creation of zoning districts is typically a grassroots effort.	Much of Montana is not zoned for hazard areas.
Growth Policies	State law requires local jurisdictions develop a document meeting specific criteria that addresses growth issues.	An adopted growth policy is required prior to the adoption of zoning ordinances and subdivision regulations. An assessment of the wildland-urban interface will be required beginning in 2009.	The growth policies are not regulatory and restrictions cannot be placed on development based on them.
Subdivision Regulations	Local jurisdictions can have regulations addressing requirements such as fire safety and open space for new subdivisions.	Local officials have the ability to regulate large development in hazard prone areas. Beginning in 2009, subdivisions can be denied where there is danger of injury to health, safety, or welfare by reason of natural hazard, including wildland fire.	Some communities may not have subdivision regulations, or they may not address natural hazards.
Planning Boards	Community planning boards can oversee growth and development and implement zoning ordinances and subdivision regulations.	Planning boards have the power to approve or deny development based on zoning ordinances and subdivision regulations.	Many planning boards are not be required to consider natural hazards while reviewing applications.

Table 4.4-1 Local Policies and Programs Affecting Hazard Mitigation

Name	Description	Capabilities	Limitations
Floodplain Management	Everyday enforcement of floodplain ordinances as part of the National Flood Insurance Program are conducted at the local level.	Local floodplain managers have the ability to manage their own area floodplains. A statewide freeboard of 2 feet strengthens floodplain management across the State. Local jurisdictions have the ability to impose greater restrictions in the floodplain if desired.	Local floodplain managers are extremely part-time and may not be able to keep up with changes in the program. Much of the floodplain mapping in the State needs to be updated.

Specifically for mitigation, the local officials through their DES coordinator or local hazard mitigation officer are responsible for:

- Working with the State Hazard Mitigation Team, as requested
- Developing local mitigation plans
- Applying for and implementing mitigation projects
- Reporting on mitigation progress

Figure 4.4-1 Montana Communities with Local Building Codes

